CONSENSUS CONFERENCE ON THE ROLE OF PSYCHIATRISTS IN DISASTER

September 18 & 19, 1995

Uniformed Services University of the Health Sciences
Bethesda, Maryland

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. AGENCY USE ONLY *(Leave blank)*	2. REPORT DATE	3. REPORT TYPE AND DATES COVERED
	September, 1997	Final

4. TITLE AND SUBTITLE

Consensus Conference on the Role of Psychiatrists in Disaster

5. FUNDING NUMBERS

6. AUTHOR(S)

Editors: Robert J. Ursano, M.D.; Ann E. Norwood, M.D.

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Department of Psychiatry
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Bethesda, MD 20814

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

Emergency Services and Disaster Relief Branch
Center for Mental Health Services, Substance Abuse Mental Health Administration (SAMHSA)

10. SPONSORING / MONITORING AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT

Distribution Statement A

12b. DISTRIBUTION CODE

13. ABSTRACT *(Maximum 200 words)*

This is an edited transcript of a Consensus Conference on the role of psychiatrists in disaster which was held at the Uniformed Services University of the Health Sciences (USUHS) on September 18-19, 1995. The major goal of the conference was to identify unique contributions which psychiatrists could bring to disaster communities and their victims. This publication represents a consolidation of perspectives from psychiatrists, other physicians, and non-medical experts in disasters on ways in which psychiatrists can aid communities to prepare for and recover from major catastrophes.

14. SUBJECT TERMS

disaster, psychiatry, role, trauma, community

15. NUMBER OF PAGES

152

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT	18. SECURITY CLASSIFICATION OF THIS PAGE	19. SECURITY CLASSIFICATION OF ABSTRACT	20. LIMITATION OF ABSTRACT
unclassified	unclassified	unclassified	UL

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PREFACE

The consensus conference on the Role of Psychiatrists in Disaster was held at the Uniformed Services University of the Health Sciences (USUHS) on September 18 & 19, 1995. The conference was primarily an outgrowth of the American Psychiatric Association's Committee on Psychiatric Dimensions of Disaster's efforts to pool psychiatric expertise on disaster preparation, response, and research. It was supported by a grant from the Emergency Services and Disaster Relief Branch, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration (SAMHSA). The major goal of the conference was to identify unique contributions which psychiatrists could bring to disaster communities and their victims. The delineation of any gaps in mental health aspects of disaster recovery was also a desired outcome.

Participants were selected to represent a broad spectrum of experience with trauma and disasters. Psychiatrists with extensive experience with the American Red Cross and with international disasters participated in the conference. Similarly, psychiatrists active in the investigation of human responses to trauma and disaster were invited to attend. Psychiatrists with additional education and interest in Child Psychiatry, Consultation/Liaison Psychiatry, and Academic Psychiatry also participated. Finally, non-psychiatrists with expertise in disaster response shared their experiences on roles psychiatrists had played in past events and ways in which psychiatrists could be of increased benefit in the future.

This document is a transcription of the proceedings from the conference which has been lightly edited to improve clarity. It represents a consolidation of perspectives from psychiatrists, other physicians, and non-medical experts in disasters on ways in which psychiatrists can aid communities prepare for and recover from major catastrophes. It is hoped that this publication will serve as a springboard for further development on the role of psychiatrists in disaster.

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SESSION I

DR. URSANO: Many of you know that Dr. Zimble is the President of the Uniformed Services University. He is also the former Surgeon General of the United States Navy. He belongs to the OB/GYN trade and has a distinguished career both in and outside the military. He has led the University in its activities with Congress over the past several years in reestablishing the foundation of the University and has been particularly helpful to the actions of the University in areas of disaster and trauma response, so we asked that he drop by and say hello to everyone and welcome you to the University.

DR. ZIMBLE: Good morning. I want to welcome you to **your** University, and I mean that in every sense of the word. This is a federal school. This is the federal medical school. Your tax dollars contribute 100 percent to the revenue of the school and we produce approximately 165 physicians each year that are committed to Army, Navy, Air Force or Public Health Service. Our training here is training in the context of that commitment. In addition to getting a good foundation in medicine, students also get a very strong foundation in the military and in understanding the discipline of all aspects of military medicine, only a small portion of which is combat casualty care, that which people think of when they think of military medicine. We're talking about epidemiology, about global deployments, tropical medicine, etc. etc., and one of the key features in the school is the emphasis which we place on human behavior and stress in response to disasters. Some of our students go on to Public Health Service, about 85 have graduated over the course of the last 16 years. We have graduated 2,148 physicians, but who's counting? Of those, 93 percent remain on active duty today. It's an astounding record.

The school was founded in order to make sure that we have career accession paths, and it was statutorily created in 1972. The first class came in 1976 and we have exceeded the expectations of the framers of that legislation. For reasons concerning the reward system, or budgeteers which receive their rewards for their ability to save outlay dollars and not to look to long-term life cycle investments, there has been a constant

move since the school opened to close the school. Luckily, we have people with more vision on the Hill in both the Senate and the House and they continue to keep us open. We have right now, a fairly promising future. Certainly we are beginning to develop an outcome that relates to that. So I don't think you could have picked a better place to come and have a consensus conference which deals with response disaster, whether it's a manmade disaster that includes armed conflict or a civilian or natural disaster, or a disaster as a result from a Chernobyl accident or whatever. The human stresses that are applied, I think, deserve recognition and the support of psychiatric response.

Dr. Ursano and his staff have produced a great deal of information in the past, while looking at disasters and how they can be impacted by psychiatry. I had the good fortune of being in Navy medicine at the time a sprint team was established to respond to Naval disasters, the Iowa gun turret explosion, for example. Such teams afford significant assistance in alleviation of the problems caused by disaster, so I hope that that's the thrust of where you're going in this two-day conference. You've got my full support. You are our guests here and anything that my office can do to make your stay satisfactory, don't hesitate to let me know. I'm sure Bob has never failed to let me know when his office has needed assistance.

I commend you to your work and I will only say that there are many facets to response disasters including how to take care of the people who take care of the dead, how to give them the emotional support they need and how to support the survivors. I don't have to tell you what your role is. It just needs to be well articulated, and I think we need to get the general public to understand the vital, essential role that psychiatry and psychology play in responding to disasters. We will always have another disaster. We're now suffering through one in the Virgin Islands where they were all asleep at the helm because they had had two prior hurricane watches that were basically "cry wolves", and they really got the wolf this time. I'm sure they're going to need a lot of emotional support.

At any rate, have a great meeting. Any questions that I can answer for anybody? We can always use your support when you talk to people on the Hill regarding the continuation of this school. It looks good certainly for next year, and my vision is that

this school will last into perpetuity. It has now reached middle age. Middle adolescence, not middle age. We're starting to see some maturation results. We're getting fantastic responses from applications. We had over 3,000 applications last year for 165 seats. It looks this year like it will go to 4,000 applications for the same 165 seats.

We also have a lot of continuing medical education in which we fully utilize the Department of Psychiatry. We have graduate programs, graduate medical education programs and we try to develop databases here so that we can be residual, we can have a residuum of knowledge for consultation purposes. We work closely with NDMS with FEMA, and see ourselves currently as a national resource for such things as disaster response, and think that the University has the potential to become even more so. Have a good two days here and anything I can do to help, let me know. Thank you.

DR. URSANO: That was a treat. Getting onto Dr. Zimble's schedule requires perseverance, I must say, because you're competing with the Chairman of the Senate Armed Service Committee. It bespeaks his particular interest in disasters when he mentions that he was the Surgeon General at the time of the establishment of the sprint teams. The sprint teams are a major institution in the military, both as a model, as well as an operative team. They are deployed at the command of the Surgeon General in response to disasters and they are psychiatric teams, in particular, which are sent out. So it is an area that has been close to him for quite some time.

DR. WEISAETH: I think it's expected that the military would be involved in humanitarian interventions in years to come. Has any particular legislation been passed here in the United State concerning military resources?

DR. URSANO: The present reading of the mission of the military includes deployment for, and I forget the actual phrasing, but it is essentially humanitarian operations. Perhaps we could go around the table and introduce ourselves, both by name and location, and perhaps say something about our connection to disasters so that we can get to know each other a bit. It's going to be two days which I think will be quite enjoyable. The general plan will be to have people come in and speak and talk and chat with us. We'll talk some more in a few minutes about the goal in the end.

Most of you, I think, know -- I'm Bob Ursano and I'm the Chair of Psychiatry here. We've been involved in disasters for quite some time. After Raquel Cohen and Bob Pynoos and several others established the Task Force on Disasters for the APA, I've became a part of that as well. This action here is an outgrowth of that work done by others.

DR. NORWOOD: Ann Norwood, Assistant Chair and also a corresponding member of the APA's Committee on Psychiatric Dimensions in Disaster. Welcome, and we're glad to have you here.

DR. BRANDT: I'm George Brandt, another member of the faculty. I've been to an evacuee center in Tampa at the Homestead Air Force Base after Hurricane Andrew, in addition to other military-related accidents, working with people in the Waco disaster, for example. I have some feel for personal experiences of people from disasters in Miami and other areas. I've had the chance to meet Dr. Blumenfield, as he discussed my paper in the past. I appreciate his generosity and that of other folks from that area.

DR. WEISAETH: Lars Weisaeth. I'm a native of Norway, a psychiatrist, and I've been in disaster research for about 20 years, the last ten years of which I've had a chair at the University as medical faculty. In Norway, that which you would probably call traumatic stress, is called disaster psychology. I'm a third generation researcher in this field, which is an outcome of traumatization of World War II, so it's combined with involvement in military psychiatry. I'm a civil employee involved in the military because in Norway you cannot be an academic and an officer at the same time.

DR. SHAW: I'm Jon Shaw, I'm a professor and Director of Child and Adolescent Psychiatry at the University of Miami. I really acquired my interest in trauma and the psychological effects of trauma and personality through over 20 years in the Army, where I was very intimately involved in trying to understand combat stress reactions. I developed an area of interest in child victims of war. I consulted in a workshop in Kuwait and more recently I had the opportunity to work with victims after Hurricane Andrew along with Raquel Cohen and Tom Mellman. We are well represented from Miami.

DR. BLUMENFIELD: I'm Michael Blumenfield from New York Medical College. I came into this kind of work through consultation liaison and was involved as a consultant to several events. More recently I've been interested in effects on secondary victims, emergency workers and members of the press and things like that.

DR. WONG: Dr. Jon Wong from Singapore and a psychiatrist with the Armed Forces. I've just started my one year sabbatical with Dr. Santos as a department physician. Basically, my main area of interest in the military is combat psychological trauma, and I have been interested in disaster trauma, the psychological sequelae. In Singapore, for those of you who may not be familiar, we are relatively free from natural disaster, but we do have occasional disasters. We had a hotel that was seven stories high which collapsed in the '80s, and we also had one instance of hijacking in the '90s. The special team stormed the aircraft and rescued all the hostages, all the passengers, so we do have an occasional incident. We work very closely with the civilian psychiatrists. It's an integrated service as far as civil disasters are concerned.

DR. MELLMAN: Tom Mellman, I'm part of the Miami contingent here. I have interest as a clinician and investigator in post traumatic stress disorder and I'm the Director of the Miami VA's Post traumatic Stress Disorder Program. My most specific research interest is sleep aspects of PTSD and my orientation to disasters was through Hurricane Andrew. I'm here representing the VA.

DR. TAYLOR: I'm Sally Taylor and I'm on the faculty of the Health Science Center in San Antonio. I am a relative newcomer to the area of disasters, although as the Director of the Psychiatric Emergency Services, a level 1 trauma center, we sort of deal with small disasters every day. I'm glad to be here.

DR. DAILY: My name is Susan Daily. I'm from Tulsa, Oklahoma. I feel like the odd one here. I'm in private practice. I'm not with a major university or anything in the military or anything else organized of that nature. I have been responding to disasters, tornadoes and the bombing and those types of thing in the communities where I have been, however, and I think that's the reason I'm sitting in here at this moment.

DR. RUNDELL: I'm Jim Rundell. I'm a consultation liaison psychiatrist primarily. Right now I'm just starting a new job as a program director for the recently

integrated psychiatry residency programs at Walter Reed in Bethesda and Andrews Air Force Base.

I'm likely to have an assignment here at USUHS over the next few months. I've been working with Dr. Ursano for several years and trying to do some writing about prisoners of war and other aspects of military disasters. However, most recently, the Air Force has asked me to become involved, and I have over the last year or so, with trying to gear up the military as it tries to respond more and more to missions other than war; identifying some of the potential disasters that the military might respond to that are not military-related.

DR. COHEN: I'm Raquel Cohen and I'm a Peruvian, so by experience I know what an earthquake is. I'm a child psychiatrist so I'm also very interested in family disaster work. I started around 20 years ago with a major disaster while visiting Peru. I trained in the States. If any of you remember the Yungai Andes disaster, it was one of the major disasters in the world, really. It's interesting how destiny puts you in a track. Well, 20 years ago it put me on this track and I stayed with it. The reason I may have a bit of experience is because I've been able to go to South American disasters and American disasters. That's a major lesson that I've learned through very catastrophic disasters and so my interest has continued. We had a backyard disaster with Andrew. I suppose I had an interesting backyard disaster in Boston, as some of you know. By being the chief of the detachment area I was able to put into practice, rather rapidly, a response team. That taught me a lot about response, total response to disaster. I worked closely with the Red Cross for 20 years, and you'll be delighted to know that psychiatry has signed an agreement with Red Cross. That's my experience.

DR. NORTH: I'm Carol North from Washington University in St. Louis and I've been investigating disasters for about the last eight years. I've worked with Liz Smith whose work some of you may be familiar with. We've been to a bunch of disasters. We started with a plane crash into a hotel in Indianapolis. Went to a mass murder in Arkansas, a tornado in Florida, the physics building massacre at the University of Iowa, the Clayton Courthouse shootings in the St. Louis area, the Oakland fire storm, and the Northridge earthquake in the Midwest, so we have a lot of data that we're in the middle

of trying to analyze. In addition, I've helped with some of the flood relief efforts in St. Louis.

MS. MORGAN: I'm Jane Morgan. I'm a registered nurse and I'm the associate for disaster mental health services of the American Red Cross. We are in the process of signing our statement of understanding with the American Psychiatric Association to better increase our capacity to work with psychiatry and the Red Cross response to disaster.

I've been with Red Cross for 15 years and have worked in a multitude of disasters within that time frame. I started off in New Orleans which is a very disaster-prone area in itself.

We're currently responding to Hurricane Marilyn in the Caribbean and that's why I was late. I had to go to the office first and recruit approximately 50 mental health professionals to go down there and supplement the professionals that are already in the area.

MS. LEVINSON: I'm Cathy Levinson. I'm a clinical social worker and I've been working on the defense women's health grant with the Department of Psychiatry with Dr. Ursano and Dr. Norwood and the rest of the team. I'm not directly related to disasters, but I hope to help you avoid disasters today, so if you have any problems, come to me and I'll see if I can solve them for you.

DR. URSANO: Craig, do you want to come up to the table? We're just doing some introductions and some orientation and then I'm going to let you talk for a bit.

It's a wonderful chance to have everyone here around the table as you are a distinguished group. We're pleased that you have taken time to come and join us. You should note a bit about the history of this project which derives from Brian Flynn's office, the Office of Emergency Preparedness of SAMHSA. We have worked, the APA's committee has worked, and many of the individuals around this table have worked with Brian for a number of years. His office is the office which coordinates the awarding of services grants following a disaster through funds coming from FEMA. He apologizes for not being able to be here. He has another meeting at this time, but it is his office that asks that we, with the APA, consider helping him to think through the issues of the role

of psychiatrists in disasters. That we try to develop guidelines, consensus, direction, that will aid in the delivery of services by psychiatrists and in mobilizing psychiatrists to think about their unique contributions in times of disaster. Our task throughout the next two days is to think about how psychiatrists, in particular, contribute to disaster responses; in what roles, in what capacities, with what unique skills, from what vantage points, what psychiatry, as distinguished from other contributors, brings to the table at the time of such a terrible event. Clearly, there are areas of overlap. I believe there are also areas of unique contribution, and there are frames of reference and perspective that I hope will come out as we talk over the next several days.

Most of you, from my view, have grossly understated your contributions to the area of disasters. I hope that all of you will talk with each other during the breaks and during the day to find out where you have run into each other's work and each other's comments and each other's contributions. From Raquel, whose name is known throughout the American Psychiatric Association, and who won the Simon Bolivar award a number of years ago for her contributions, particularly to understanding disasters in South America, to Lars Weisaeth, which is a name that you can't be in disaster work without having heard, to Jon Shaw's contributions in Africa prior to his work in Kuwait of designing intervention programs for children, to Jim Rundell, who didn't mention anything about his work in consultation liaison psychiatry and the question of where injured people show up in a hospital. It is a broad arena that sits here at the table and I mention only a few.

I hope that you all will spend some together because I think it will enhance our conference the more you all get to know each other.

DR. URSANO: Ann, anything you want to comment about? Ann has been, I must say, the lead person on making all this happen. The reason that everyone has managed to make it here is because of her effort.

DR. NORWOOD: I wanted to acknowledge Cathy and Alice in our main office and Freddie, if you can, get a chance to see them.

Again, if there are any logistical problems in terms of wishing to switch hotels or anything like that, please let me know and we'll see what we can do. We're delighted to have you here and we look forward to a good conference.

DR. URSANO: As things go on, I hope the direction will become more informal.

Well, we're just about on schedule and pleased to have Dr. Craig Llewellyn with us. Craig is the Chairman of the Department of Emergency and Military Medicine here at the University. He has been a strong supporter of the contributions for understanding behavior in disasters. Before he put on the multi-colored clothes he wore a green uniform for many years. He has had direct experience with multitudinous disasters and in particular in Peru, as I recall, right? He has a number of people in his Department which serve on the DMAT teams, Kevin Yeskey for one. He is the Director of the Center for Disaster Medicine here at the University.

We asked Craig to come and talk to us from his vantage point, both specifically about psychiatry and behavioral science, in terms of his experiences with things which were left undone in a disaster that perhaps psychiatrists could have helped out with, and also more broadly about the role of physicians in disasters.

With very little guidance, I'll ask him to be extemporaneous and feel free to fill us in on what's on his mind as well.

DR. LLEWELLYN: Thanks, Bob. I appreciate the opportunity to see many old friends and acquaintances and see some new ones also.

I was stimulated unexpectedly last week to put a different twist on what I wanted to say to you this morning. I had a meeting with people from FEMA, and they were coming out ostensibly to pick our brains about how we trained the initial DMAT teams -- the way we train them is not the way they turned out to be -- and secondly, they were looking at how they might utilize some of the techniques we use with our medical students in doing board games and command group simulations. When I leave here, I will go to Texas to do a five day field exercise for the senior medical students called Bushmaster, where they have to make a variety of command decisions while providing care for patients. George and Ann both know about this, having been involved with it in the past

The interesting additional stimulation was that the Chief of the Branch in FEMA, the first layer down from James Witt, who is also interested in liaison activities to set up different kinds of multi-disciplinary training, turned out to be a former classmate of mine from the Armed Forces Staff College, a guy named Mike Austin. He's been in his job for 13 years, and it never occurred to him that the University might have anything to contribute in this way.

As we talked, it became clear that we were using the same terms in very different ways. I think that is a good point of departure from this standpoint. When I have been sent to participate in some kind of disaster assistance, it has invariably involved walking into a situation where I had very little information about the extent of the disaster or about any plan that might have been developed, a generic plan that was supposed to drive the response. Even worse, I had no idea what preconceived notions the responders had based on exercises we do to prepare them for these things. In thinking about emergency medicine, emergency physicians, like psychiatrists, I think, believe that what they do is the most important. Their work is comprehensive. It is involved with all aspects of a disaster. Emergency physicians deal with systems, the EMS systems, and they interface with trauma centers and a variety of other places. They're the general practitioners of disaster medicine, if you will.

The exercises that are generally run to test emergency responses focus on the least probable kinds of situations, but they do focus on the kinds of things that the teams are able to do. Consequently, emergency medicine teams, DMATs and so forth are always presented a large number of casualties to triage, many of which need lifesaving resuscitation and so forth. There's not a whole lot of disasters that have that kind of presentation. First, the emergency teams can't get there in time and the people who need the lifesaving interventions either got it before the team arrived or they don't need it any more. Similarly, for surgical teams, they come with the same kind of attitude. I don't know what psychiatric teams and exercises might be like because, frankly, I've never seen one, and I'm not aware of them being included in any of these responses.

Now, if one then goes to the next level of abstraction, the response to a disaster is supposed to be in some way coordinated and directed, but we from a medical standpoint

approach it as though the medical component is the most important thing. Not infrequently there is no acute medical component to a disaster. The medical component ensues when the initial response is screwed up. We don't handle refugees right. We don't handle a variety of things right, and then we cause those kinds of medical problems. Or, we make sure that we get the emergency responders in first when what we should have had is a multi-disciplinary team which can deal with lifeline service assessment and try to get our communication, transportation, those kinds of things back to some acceptable level in the shortest possible period of time.

Now why would people behave like that so consistently over time? Well, fortunately, disasters don't happen very open and so people are left to their own devices to conjure up what it is that they're going to be able to do in the aftermath of disaster. It struck me, given the experience that I have had with psychiatrists and other people in the mental health and behavioral disciplines, that the first place for them to play in a disaster setting is with the policy makers who are going to set up the guidelines for how plans will be developed. Thinking about how to respond solely in the aftermath of disaster is way too late.

I think psychiatry has a major role, as does public health, in trying to help people recognize when they're making plans and setting up exercises which, in fact, are unlikely to be related to the kinds of responses they're going to have to make. Now that would imply that the people who were doing this sort of work at local, state, and regional levels are really going to focus first on the most probable kinds of disasters and secondly, on whatever their greatest vulnerabilities are. I don't think that's true, but that's why the all risk approach, while it sounds very good, in fact, is probably not a smart way to go. It flies in the face of all the guidelines that are given by the quote unquote disaster experts, who say you need to do the probability assessments: Is earthquake more probable than flooding over a 50 year period of time? You don't have to be a rocket scientist to be able to find the data which indicate on a locality basis and on a regional basis and so forth what kinds of disasters occur most frequently.

Then there comes another problem of when we say "disaster", do we all mean the same thing? I've heard people mention responses to airline crashes. I think they're

disasters. But the response to an airline crash is a very different kind of thing from an instant command standpoint; from the standpoint of whether the police are in charge and so forth when Hugo hit. I think most health care providers are relatively insensitive to those vagaries. What they're really looking at is whether there are any people hurt? Are there any people sick? Do we need to intervene with any people who are decompensating and so forth, so they never really look at what has to come before, which is how you are going to define the universe in which you're going to function, and who controls it? Or who thinks they control it?

I guess the next most obvious thing is that there should be evaluations of training exercises, not so much from the standpoint of whether the responding units are able to function internally, as individual cells, but whether there are obstacles to their functioning in any kind of cohesive way. Not infrequently, some of these things look like persistent neuroses. I know that's not an acceptable term any more, but the behavior patterns in local government response and perceived political influence as opposed to reality when looking at a county interacts with a state. Forget about this federal stuff, unless the county/state piece is working in some way, the feds are going to spin their wheels over and over and over and they'll put the best possible face on.

I would submit to you that in the situations where a disaster has been something other than a multiple casualty incident, and I don't mean to denigrate the response to big train wrecks and so forth, -- those generally don't impact a community's ability to function. It causes a great deal of pain and you have to focus resources and so forth, but I think we need to separate those kinds of things from what requires coordination amongst a variety of community support services. I don't think that anybody pays much attention to what happens behaviorally to the people who are trying to affect communication and coordination to deliver even the limited services that may be available.

So I'm going to stop focusing on that at this point, I'll simply say that I think attention to what precedes any disaster is of enormous importance in being able to understand what occurs when a disaster strikes.

The next point is one that I'm sure everybody in the room is familiar with. While we talk about disaster victims and those unaffected, I submit to you that in communities impacted by disaster, I think there are no unaffected people. If you can identify some who are, put them off to the side and congratulate them. By viewing victims only as those who are severely decompensated either physiologically by trauma or illness or to psychological reaction, we're ignoring what I think has to be the fundamental precept. We must try to do the maximum good for the entire community, and if we're not going to pay attention to those people who have not raised their hands to say "I'm sick, I'm hurt, I need care right now," in some ways we contribute to their continued decompensation over time.

The same thing is true for the responders. It is too late to deal with the sequelae or the reactions of the responders at the time they occur. There has to be outreach, and the only way to reach out to the responders is by knowing what the plan is and who is going to come in, and then by working within responders' command structures before it occurs. I'm sure I'm not telling anybody anything new when I say there is a growth industry in critical incident interviewing and management. I probably get five fliers a month from somebody running a course in this stuff. It becomes convenient for the disaster managers, the emergency managers, to say, they've dealt with that psychiatric stuff and had a course, and when things get really bad and there are lots of bodies to be processed, I've got two techs who can sit people down and go through a profile and so forth and that takes care of it. Of course it doesn't and everybody knows that, but the educational process, I think, requires that qualified mental health personnel are making the overtures. You can't wait until the disaster managers and the emergency management comes at you. It has to be prospective. We have to grab their attention well before anything occurs, and you have to find ways to insinuate yourself into the planning process, the evaluation process, the exercise process. My guess is if that's done it's going to be much easier to actually deliver care, as well as to gather data. You can be talking to the managers about the same things that we push the public health and the emergency medicine people to talk about, i.e. prospectively setting up the methodology and policies

and methodology in gathering data while the response is occurring so you have some idea of whether anything you're doing makes any difference.

Generally, the data gathering schemes are set up in a great panic once permission is granted for somebody to go in to do a study. In some cases that may work, but I think in a majority of cases it means you're going to miss a lot. I've never seen routine data gathering schemes which provide all the information needed at any of the disasters I've experienced.

Eric Nogee and Scott Littlebridge, who are the CDC's gurus, are both members of my faculty, and claim that for better or for worse, I influence their thinking about disaster assessment a great deal, because that's been my thing, if you will, since going to Peru in 1970. I realized when getting down there 10 days after it occurred that nobody knew what had happened or what had been done. When we left two weeks after that, we could barely tell what we had done during that same period of time, but we had all done things.

DR. URSANO: Craig, how would you define disaster assessment? I think that perspective and the preventive medicine assessment picture of the problem might be helpful.

DR. LLEWELLYN: We approach it in a three-phase way. The first time it was actually done in a major disaster was in the East Pakistan cyclone of 1971. Long story short, the OFTA cholera lab had four excellent epidemiologists and three of us who were together in Peru argued strongly with OFTA they should not send cholera vaccines or hospitals to East Pakistan first thing. The first thing they should do was ask Al Sommers to put together a survey of what the impact of the cyclone had been and to make available airboats and helicopters to them. That was done, and within 72 hours they had done both the primary and begun a second multi-disciplinary survey.

The survey technique in Phase I involves looking for population centers which have suffered extreme damage, and using that as a central point, to then work in concentric circles from there. We teach our fourth year students the technology for the sampling. It's fairly crude, but it allows one to sample not only the impact on structures, on life line services, but also you can either drive or land a helicopter and get some idea

of what the denominator population was before the incident, and an estimate of how many survivors there are left.

We then ask them to do at least a 30 percent additional sample of unaffected surrounding areas. Now we're talking about some land mass of significant size that's been affected by disaster -- the same thing applied in South Florida. You use that as the basis first for indicating what the emergency survival requirements are. Generally those requirements do not include much in the way of medical support and use it as a basis for putting together the multi-disciplinary survey teams. We have experts with agriculture for example. One of the big things in East Pakistan was a recognition that there had been significant loss of life. There were very few people sick or hurt. The people who survived had a peculiar pattern of injury, abrasions on the inner arms, inner legs and chest, from hanging on to trees so they didn't get washed back out to sea. The other thing that occurred was a recognition that they had lost all their prime movers for planting and it was time to plant again. The prime movers weren't tractors, they were water buffalo, so a major thrust ensued to try to get money into water buffalo to get back out to these people, not thinking about the acute response. It was reasoned that if you don't intervene now, you're going to have a famine three months downstream from here.

There was also an enormous contamination of surface water so since this is the, if you will, the home base of cholera, should we have assumed there's going to be more cholera, more or less? Nobody assumed, in fact, part of the scheme with the multi-disciplinary survey was sampling these places. It turned out that the positive cultures for cholera in surface water was about 10 percent of what they would have estimated. Apparently, it flushed the whole thing out. So now there was not an enormous amount of concern about how to deal with providing adequate water.

The multi-disciplinary survey that I said began within 72 hours focused on very specific kinds of things related to findings in the first phase and that was then tied to Phase III. Phase III involves surveillance of all aspects of the disaster response, taking advantage of whatever kind of reporting facility is available, whether it is a small health post, a malaria survey team, or an agricultural post, and asking for weekly reports on any requests for medical assistance. You then come up with syndrome labels since the kinds

of people who are going to be doing surveillance infrequently will have detailed medical training for laboratories, so you're interested in things like fevers, fevers with cough, diarrhea, bloody diarrhea, very crude kinds of categories, and that allows you to deploy your more sophisticated medical resources to places where there's clearly been a change over some brief period of time.

Anyway, Al Sommers is the name. S-O-M-M-E-R-S. So if you want to check it out in the Lancet, that was the first time that this approach was used.

The approach has been poorly applied in the United States principally because of jurisdictional issues, turf issues and failure to recognize that cross-cultural problems are not a phenomena related solely to overseas disasters. We've got them right here at home, and they exist between the local culture and the state culture and the state and federal cultures. I'm sure the same differences exist between the national Red Cross and its local chapters. Are we on the same planet here? What's going on?

So talking a lot about the administrative interfaces is important. I think that before we get anywhere near thinking about how we're going to deliver care to those who require it in the aftermath of a disaster, some focus, by people with sound grounding in behavioral sciences, psychiatry and so forth, on how we're trying to prepare to approach disasters would be enormously beneficial.

Now this will scare folks. The concept of gathering data in disaster scares folks because in any organized jurisdiction, it doesn't matter if it's a nation or a county, somebody may lose politically if the real numbers surface. There's no good outcome for disaster. You are tainted by having been in office or in charge, and it occurred on your watch, so the spin doctors are going to be involved early, early on and I think everybody has to recognize that and recognize that a price may be paid for it. We all know that absolute changes in human behavior are difficult to bring about, so figuring a way to function in the face of that kind of behavior, I think, becomes important.

DR. URSANO: I wonder if anybody would have any questions or comments?

DR. LLEWELLYN: Last thing I'd like to say is that I think that it is essential that any kind of medical response effort, any kind of medical or public health team, have a psychiatric mental health behavioral science, however you want to label it, with

embedded representation. Not somebody who gets plucked out of a place and put on and told, "you go be the shrink for this team." Somebody who has been involved in the thinking through and the planning for what's actually going to transpire.

Now, if anybody has questions?

DR. WEISAETH: I think you suggested that the known government or organization stay out of the competition. When you raise the issues of numbers, that some may lose something, the big problem of coordination is that you have a number of organizations each needing a hard profile -- to raise funds, etc.

The military also has a problem here. They're afraid of having to use so much of their resources which will be taken from national defense.

DR. LLEWELLYN: Conversely, if it's a big deal disaster, the military wants to be a player, so there is real cognitive dissonance. If Air Force aircraft are flying in needed supplies, you just can't have that happen, it has to be captured on film.

The same thing is true if the state has invested heavily, and I'm talking about the State of Florida, in having a response capability. They're going to want to use that even if the locals have it in hand. And there will be enormous pressure from outside for the feds to also get to play.

If you look at the mobilizations -- there's no way you could easily look at it here -- if Frank Young were to come, you could ask him about how many people have been on stand-by through OEP for a national disaster medical system response with all these hurricanes that come up, enormous numbers. I know because some of them are my people who have been listening to their beepers and know from CNN that the probability of any significant land fall is very low. But your point extends throughout the response structure. The urge to be a player --

DR. WEISAETH: So you raise the issue of how you are going to see to include the situation that disaster relief work is demand-driven and not so orchestrated. Is this what you're --

DR. LLEWELLYN: In a way, but I'm trying to deal also with the preconceived notions that people have about their role, the value of their team, and the value of their response. I'm trying to help them develop some insight into how these ideas, in fact,

may be an obstacle to their making an effective response instead of something that's useful. I'm also trying to help the managers and the planners of disaster systems recognize that frequently they are providing the information that leads to these preconceived notions by virtue of somewhat silly or extraneous kinds of exercises, so-called disaster exercises, that raise expectations for response capability that don't really exist.

DR. BLUMENFIELD: You mentioned something early on, that I think has a lot of important psychological implications, about how people are well-trained, highly trained to perform, whether they be medical people or nonmedical people. Most of the time, you said, or I don't know what the numbers are, but you suggested most of the time they're either too late because the work has been done or because everybody has died in a catastrophe. I think that we know that psychologically that is a very damaging issue to those people. I think we see that particularly when -- I'm sure it happens in all cases, but particularly when there are children involved. I know it always stands out. Individual cases show how upsetting it is to surgeons and to others, to fire personnel and I'm sure military personnel when they come into situations and they find that they're too late. And yet, so often, we're directing our psychological care to the people who work with the victims and the people who are active. I think we should really underline the point that we have to look for the groups, whether they be the units that are turned away to then just go back to the station or to get on the plane and fly back because they weren't used, or those that get sent on leave or whatever. We think they weren't involved, that we don't have to give psychological care to them, particularly the secondary workers. So I think that's a very important point that you alert us to.

DR. LLEWELLYN: I don't know if you've seen the pictures from Oklahoma City, the numbers of emergency medical personnel, trauma surgeons and so forth who were mobilized. By the time they were mobilized and all set up, there were no more casualties to bring. The sense of having failed in the informal interviews with those people was enormous. They thought that there was going to be an even greater wave as people were brought out of the rubble and so forth, and part of that has to do with ignorance of what happens when bombs cause building to collapse. There are excellent

data about these things, but rarely are they put into disaster exercises, because if you did that, it would point out to people, as we tried to point out to the DMAT teams, that the principle demands for medical care have to be met locally within the first two hours, two hours if it's going to be lifesaving at that point. By the time you bring in DMAT teams from outside, the principal demand will be for primary care, if you will, and public health, preventive medicine, including a considerable amount of out-patient psychiatric support. Essentially the people demanding care will be the people who needed care before you got there, but they may need it a little bit more now. If the local medical facilities can no longer handle the geriatric population, people will go into diabetic kioacidosis and on and on and on and on and on, not trauma kinds of issues. George?

DR. BRANDT: A similar metaphor for the impact of training and your response in a disaster environment. I'm amazed that people do what they're trained to do when it may not be the most appropriate. One metaphor, from Goma Zaire that sticks with me is that of a highly trained western team and a Bangladeshi teams' mortality rates for cholera, which had basically a 95 or 99 percent prevalence in this population. The Bangladeshis lost 1 percent of the people that they treated with cholera. The western people with western medicine, using IVs and other constraints, had 10, 15, 20 percent mortality rates. They were doing what they were trained to do and what they knew to how do and what they were familiar with, but that was completely ineffective compared to experts in the field. How do you get the training that's most appropriate for that environment? Very similar to what you're talking about.

DR. PYNOOS: I wondered if you turned on in terms of emergency psychiatry and emergency medicine psychiatry. I know you're talking about the issues of bringing in teams to disaster sites, but it seems to me that in the large-scale disaster sites I worked on, the area of emergency psychiatry has not been present. In the emergency rooms and acute settings where our wounded and injured and the dead are brought, lists are kept. The injured are contacted and spoken to. Their family members and the family members of the dead are spoken to at that point, also. In the United States right now, there are no local areas which have a systematic way for additional assistance to be placed in those

settings to ensure that those who are most high risk for consequences afterwards are attended to. In Oklahoma City, none of that occurred.

DR. LLEWELLYN: Yes, you're absolutely right and that's why I'm saying the involvement has to be with the policy makers and the people who set up the plans and exercises long before a disaster occurs. If you don't build it in at that point, trying to do it ad hoc when the disaster occurs is --

DR. PYNOOS: I would agree. I'm saying we need to be building that in to begin with. If you're flying people into Oklahoma City within the first couple of hours, the idea is to put somebody in the emergency rooms --

DR. LLEWELLYN: I'm not a proponent for flying people in.

DR. PYNOOS: Well, sometimes the local areas would need assistance. Northridge was such an area after the earthquake, a large earthquake. You may need to mobilize the assistance from a larger region, but they should have assigned response -- or local people that are part of a larger regional plan that have assigned responsibility that way.

DR. LLEWELLYN: Having spent just a little while on the ground out there with Kevin Yeskey, who was in the mission support unit at that time, I would submit to you that there were plenty of resources that could have been called in from surrounding areas if they had been so organized, trained, and so forth.

We couldn't identify any plan that made that possible, so looking at the local obstacles and educating the nonmedical disaster planners seems to me to be the first thing to do. The emergency preparedness folks should think beyond how many trauma centers they have to call upon in an area. If they really want to have a functioning community in any short time afterwards, the outreach needs to begin before the disaster occurs. The appropriate kinds of personnel need to be augmentees to the trauma centers, the emergency rooms and so forth.

DR. PYNOOS: We talked about that as a committee in APA and that's an area that American psychiatrists have really not given much attention to at this point, nor has the American Red Cross or anybody else.

DR. LLEWELLYN: You can't get it done through medical channels.

DR. COHEN: I'd like to reinforce a point that was brought up on how professionals are trained to do their jobs well and the satisfaction they get from doing their job as they were trained. In some way, there's an important difference between the medical fields. If a surgeon gets there, he can do emergency surgery and if there's something to do, he can do it well anyway.

DR. LLEWELLYN: If there's something to do.

DR. COHEN: It's very clear to a surgeon what he has to do, whereas for a psychiatrist who gets there it's not very clear. In some ways, at disasters like that it is a flip flop from clinical psychiatry. We have another problem, we have very well trained psychiatrists, who, when it comes to disaster psychiatry, are not as well prepared as the surgeons. To me that is a very important point and I wanted to reinforce it.

DR. URSANO: Jon, make a comment and then we'll need to move on to at least stay in the ballpark.

DR. SHAW: There is a difference indeed. For example, after Hurricane Andrew, the psychiatry units were mobilized very quickly down in the Homestead area, but in actuality the people who came into those centers were really predominantly concerned with issues about food and shelter. They were not so much concerned about mental health questions at that point. We had public meetings, shopping mall meetings, church meetings in the immediate aftermath. The people did not come in great numbers. It was only as time went by, and after the initial shock effect that the acute psychological distress really became paramount.

DR. LLEWELLYN: And I think that points to why the initial assessment, secondary surveys and then surveillance become important. You don't have to deploy everybody out immediately. My guess is that there were some pockets throughout South Dade that had considerable needs. The only way that you find out about that is by going out to where they are as opposed to waiting for them to come in to you. Of course, that's what we had recommended that DMATs be prepared to do, and ultimately that's what they did down there. They did outreach, if you will. I'm not focused only on the DMAT teams.

The easy response could have been to say, "Gee, nobody is coming in so we don't need to worry about there having been any significant psychological impact from this." At some level you've got to have people who are appropriately prepared to advise the policy makers on the effects. The effects in the human population vary over time. They vary also by type of disaster. All of that epidemiology is fairly well known, it's been documented in the last 25 years.

What is **not** in there is, if you will, the psychiatric epidemiology response to disasters. If you look at Victor Sidell's chapter in Last's Textbook of Preventive Medicine, which is one of the few places where you can see a detailed comprehensive textbook approach to medical aspects of disasters, that aspect is clearly missing. The issue of the disaster syndrome and post traumatic stress disorders is mentioned. I'm suggesting that we just have to find a way to get beyond that and have psychiatric issues surface much earlier.

DR. URSANO: A much broader description of the psychiatric epidemiology of disasters over time. Thank you, Craig, for your comments. Any time you can spare during the day, please drop back in. We enjoyed your comments and view.

DR. LLEWELLYN: I'm getting on a plane to go into the field.

DR. URSANO: Have fun.

DR. LLEWELLYN: Thank you very much. Have a good meeting.

DR. URSANO: Thank you. To try and keep us in the ball park, we'll move rapidly on to Jim Rundell. Jim is, as I mentioned earlier, both noted for his contributions in the Air Force and psychiatry. If you ask who knows best about the logistics of actually deploying a team to a disaster, that would be Dr. Rundell. He knows the types of coordination that must occur and how to gain entry to multiple types of disaster sites. The other perspective that we had asked Jim to bring to bear for us was that of consultation liaison psychiatry and recognizing epidemiological psychiatry issues. The epidemiology of disasters span inside and outside the hospital and frequently fall into the range of CL psychiatry. Jim and Mike Wise, by the way, have the textbook of consultation liaison psychiatry coming out from APPI press this year. Without a doubt,

it will be a major seller because it will be the best thing on the block in terms of CL psychiatry. I'm sure many of you already know his concise guide to CL psychiatry.

Jim?

DR. RUNDELL: Maybe a good way to start in lieu of a paradigm shift is to come into what you were saying about logistics. I'm going to agree a lot with what Dr. Llewellyn said and just take a couple of minutes and tell you a little bit about what happened in Oklahoma City.

On the day that the bombing happened, Tinker Air Force Base became quite involved in the initial response, as well as in the continuing response of body identification and help digging through the rubble and all that. They called out right off the bat asking for people, and the nearest Air Force medical center was Wilfred Hall. It's only obvious that they should respond. If Dave Marlow were here, he'd be jumping up and down and he would be talking about how we always fight the last war, and that what happened there was exactly what happened all the time. Using the psychotherapy paradigm, we might call it experience bias, that we all tend to use our own resources and past experience to do what we do now. The commander there, General Carlton, who I like a great deal and have a lot of respect for, is a surgeon, and he had been heavily involved. He's also a flight surgeon and had been involved in Operation Just Cause at Panama where they could have benefited a great deal from fast response by on-the-ground surgical teams due to the brief high intensity combat and trauma. In the intervening years after Just Cause, he created fast response surgical teams. He had them all around Wilfred Hall ready to respond at a moment's notice. They did at Oklahoma City, and within 24 hours he had sent 36 or 42 people, I can't remember the exact number. And just like Dr. Llewellyn said, if they had gotten there in the first 30 minutes, it might have been nice, but that would have been physically impossible. When they got there 24 hours later, the people there said it's not what they needed, that they needed mental health. The teams were sent back with a fairly angry note saying, "You didn't ask us if we wanted them and if you **had** asked us we would have told you no and would have said we need mental health workers." All this time they had been calling Washington saying we need mental health, can you get us some mental health teams?

This, of course, was on a weekend. It always happens on the weekend or at night. There was no trouble getting a mental health team assembled down at Wilfred Hall. The problem was that the Commander there said, "No, we're sending a surgical team. Our claim to fame here is our surgical response." He declined to send the mental health team. We went all the way up to the Surgeon General of the Air Force who finally had to call the Commander at Wilfred Hall and told him to send a mental health team. This happened at the same time that the surgical team was on its way back, not being needed. So he did indeed end up sending a mental health team which was there for several weeks.

Afterwards, He kind of fessed up and said he'd learned a new lesson that the next time around he'll understand the importance of having mental health, like Dr. Shaw says, not jut for the initial event, but also in the days and weeks that follow.

I think Dave Marlowe's point is the experienced bias. We always seem to fight the last war or respond to the last disaster. The issues become how to incorporate flexibility and adaptability into our structure each time we have something new, regardless of what we're facing. How to train for adaptability and flexibility rather than train for the last disaster or train for the last war.

Dr. Sommers has been trying to get me to look at disasters with a CL focus for a long time. I'd say I've tried to do that, to use the CL model of how we take care of patients, and use that paradigm to look at how psychiatry responds to disasters. I still can't say I think that that's a paradigm that's globally useful, but I'm not sure that I can look at a disaster just through a CL paradigm and make sense of it.

However, there are some concepts and some principles that we apply that do shed an interesting light on how psychiatrists respond to disasters. Not always the orthodoxy either. I'm not sure CL psychiatrists would totally agree with the concept of the mental health part -- having a mental health tent separate from the medical tent idea. I think our own experience bias is that that's not how we operate and that's not how we generally think care is best provided. So when I'm on committees, and they're talking about the medical tent on that side in the air field and the mental health tent on the other, I kind of cringe a little bit and try not to inject my own experience bias too much. But I still have

some problems, organically, with that concept because of the way that CL works. We take care of people where they're sick, not where we'd like them to be.

As an example of that I'll tell you of another struggle of truly the last war that's going on now in the Balkans. The DOD has supported, for a year or two now, a medical facility near Zagreb, which is helping to take care of the UN people as well as some of our own people we have in Croatia. It's a busy operation. It's not one where you sit around waiting for the disaster to happen. It's busy right now, largely taking care of UN folks and some of the civilian casualties around as well.

The Air Force is supplying a lot of the needs for that now, which the Navy had been before. Just a couple of weeks ago, I talked to the CL psychiatrist at San Diego Naval Hospital. Her first name is Frieda. I can't remember her last name right now, but she had been over there for six months about a year ago, and she is a CL psychiatrist. When she got there, she didn't just work in a carved out mental health outhouse where they put her to work, but they also put her to work in emergency room call and she did emergency room duty. Her biggest complaint was that she worked harder than everyone else because she was working full time at two separate operations, doing primary care, emergency room call and night call, as well as working in the mental health part. I asked her what percentage of the people she took care of in each of those areas did she think were actually people who had somatoform disorders or psychophysiologic disorders, and she said at least half, not just in the mental health part, but also in the medical part. This is not scientific, this is just her gut feeling, but more than half were actually people with conversion disorders, or psychophysiologic disorders, or people with anxiety or panic attacks that were being misread initially as some kind of a medical problem or dehydration or something like that, or mixed disorders, psychiatric and medical.

I'm not sure it's so easy to separate out the mental health tent and the medical tent in a disaster sponsored disaster operation.

I'm going to just talk about a few areas in CL psychiatry that may actually materialize in disasters and traumas. One of them is psychiatric disorders that may present with physical symptoms or physiologic signs and symptoms. Out of all the studies that have been done about disasters, these are all the psychiatric disorders that

you may see. Several of them may present in medical settings, not in psychiatric settings. For example, panic disorder. Just here in the Washington area, all of my clinical work, almost all of it, is done in family practice in certain term medical settings, outpatient as well as in-patient. Anybody who works in that setting knows you just turn up panic disorder under every rock, that it's everywhere. Those often present within medical settings. How many people have we all seen who make it to the cath table before their panic disorder finally gets diagnosed. That's one good example of how someone who is having panic attacks or generalized anxiety symptoms may well end up in the emergency room or in the primary care clinic rather than walking into the mental health tent. So that's how we make the emergency physicians and primary care physicians cognizant of that as they work in their emergency rooms and primary care clinics.

PTSD may present with sleep deprivation and too much alcohol use and palpitations and some of the sympathetic nervous system, autonomic nervous systems that might be misdiagnosed or lead people to bark up the wrong tree diagnostically. Obviously, somatoform disorder patients may present in the emergency room, people who have lost the use of an arm or a leg, for whatever reason, they will wake up in the emergency room rather than walking into the mental health tent.

I think that somatoform disorders are common when people have psychiatric difficulties following exposure to a traumatic event, either as the primary or the secondary victim. I think somatoform disorders are common. Everybody in the room probably knows who Arik Shavlev is. He and Dr. Belenky have confirmed that following the Lebanon Wars in the early '80s between a fifth and a fourth of all psychiatric casualties were actually conversion disorders, just that one somatoform disorder made up a very high proportion of the casualties at that time. When people also have another psychiatric disorder it increases the risk of having a somatoform disorders like conversion disorder.

Those are ones we teach about to teach medical students. We use the examples of basic training in the military and how every day in a large basic training center like Orlando, or formerly Orlando, or at Lakland Air Force Base, the ambulance picks up half

a dozen or a dozen people and brings them to the emergency room. Most of those people have dehydration, but a couple of them have lost the use of an arm or a leg or something like that. We don't use the BICEPS principle to treat those people. We don't send them back to duty, as it were, at least not in that particular instance. We do pretty much the opposite. We try to find out what bind they're in, get them out of their bind, and don't make the symptom permanent or reinforce it. We haven't had good luck in sending those conversion disorder patients back to training just to stay in the military. Their symptoms resolve and they go home and we think they do fairly well, based on what limited data there is. There are some instances where the expectation of return to duty and sending people back to duty may not be the best thing to do. Our CL experience tells us that sometimes when people get to the point of having a primitive symptom like a conversion symptom, it is a warning sign that maybe they ought to be pulled. That may not be true, but it's an area to be considered and an area maybe to study. We can make the case that somebody early in basic training is different than the seasoned combat veteran who has been through combat before and has a conversion symptom. There may be two separate populations. In our CL work, we try to find out what bind someone's in and then try to relieve that bind rather than trying to use magic to say you'll get better and you'll do just fine.

Fitting disasters into a CL model is a little bit difficult in some ways. In the CL textbook that Dr. Ursano was talking about there are 45 chapters, and there's not a single one on trauma or disasters. However, the concepts of trauma and disaster work show up in virtually every chapter. For example, when we go and get a consultation on someone in the hospital or a surgical patient who is having trouble, it's pretty organic to the way we do business. It's second nature to wonder whether the trauma of a surgical procedure isn't some way a metaphor or a reexperiencing of an earlier trauma, and so that way of thinking about a relationship between a person's experience now and the past is pretty organic to the way we do business. Some of the ways that field psychiatrists work in medical settings may well have some implications for how we take care of patients in disasters.

Let me just try to move along here since we're a little bit behind, and say a little bit about psychoneuroimmunology. This is certainly a field of emergency interest in CL psychiatry, behavioral health psychology, medical psychology and a lot of other areas.

Anybody who is involved in that work at all knows that the early days, by early days, I mean the last 10 years, were a very big challenge because the small core of people who were doing that work were largely seen as true believers who wanted to show that you could use the mind to make your immune system work better. Their work was largely discounted because they were seen as a group of people out to prove a point, using test tube data to try to convince patients that they shouldn't get their chemotherapy. And so it was largely criticized at first. There is a lot of in vitro evidence, by in vitro, I mean test tube and what you can measure in the lab, that stress has an impact on in vitro measures of the immuno function. We still don't know to this day in AIDS or war or anything else, how that translates in the human body. I'm not sure that those studies are simple. I think if they were simple they would have been done. A lot of people are working on it and it's very important, but to this day we don't know. Recently, there have been some studies of Croatian men who were taken prisoners by the Serbs and released. Some psychoimmunologic studies have been done on that group, and just like in a lot of other situations, the CD4 CD8 ratio was very, very low in those returned POWs as compared to healthy matched control subjects. In addition, natural killer cells, cytoactive toxic activity and phagocyte function were also decreased and depressed right after release. In addition, serum interferon, serum cortisol, serum prolactive were also significantly less in Croatian prisoners of war who were just released.

That offers some tantalizing possibilities about whether people who have been exposed to trauma are likely to get sick because of depressed immune function. It's also possible that some of the physical factors of being held as a prisoner of war could also affect some of these immune cell functions. We don't know yet what the main effect is on the human body of having been exposed to a disaster or trauma situation.

Again, the point of not fighting the past war raises the question about the future? What are some of the future challenges in disasters and trauma, particularly in areas where CL psychiatry might be of some help? One obvious one is the increasing exposure

of civilians to military-related trauma. Some of you may know that in World War I the estimates are that only about 5 percent of all casualties were civilian. The damage was done largely in the front lines and trenches right around where people fought. In our most current war, the latest war in the Balkans, 95 percent of casualties were civilians so it's totally flip-flopped. Without even counting nonmilitary disasters, but in military operations only, the proportion of civilian casualties is high, extremely high. What impact does that have for disaster response?

We have thought for decades about how we would take care of military people exposed to combat, but what about civilians exposed to combat? A lot of women are being raped in the Balkans by all sides. There's no guilty or innocent side here. They're all doing it, and so do we consider that military trauma or do we consider that some other kind of trauma to those victims?

We're deploying women into harm's way in the recent years for maybe the first time. We're not talking about women civilians being exposed to military, but women in the military being exposed to trauma.

The potential for exposure to toxins in contained environments hasn't gone away. You can just pick up the paper every other day and it talks about how the Iraqis were that close to using this or that biological or chemical agent, or may well have.

And just the implications that those agents might have has created a great deal of aftermath from Desert Storm. To this day, we're still working with people who think they were exposed to something. They might or might not have been, but just the thought that they could have been has created a great deal of aftermath.

At Walter Reed and Wilfred Hall now there are fourth round Desert Storm evaluation centers where you still can't find out what's going on. It may well be this somatoform disorder realm to a large degree, but we don't think that's the best way of approaching it, so we're still, five years later, trying to figure out what went on. And if nothing went on, why has the thought that somebody might have been exposed to something created all these thousands and tens of thousands of evaluations.

Those are potentially some things that can happen in the future. The other is one that is commonly called in the military "missions other than war." The military is

responding increasingly to disasters and trauma situations apart from just war. These may well be increasingly important for the future. A lot of people who are CL psychiatrists, who you hear talking about disaster and trauma in their hearts, don't agree with some of the long-standing traditions and precepts about how we manage mental health aspects of those disasters. We kind of keep our mouth shut a little bit though. I might overgeneralize a little bit here by saying our feeling is similar to the way we feel about the mini mental status exam. Most of us in CL psychiatry hate it. It's the only test we use in medicine besides the sed rate which has neither specificity nor sensitivity, and most of us don't like it, but we use it and we teach others how to use it because it's an organizing concept. If it will get internists and emergency room physicians and surgeons to do any kind of a mental status exam, we'll keep our mouth shut about how sensitive and specific it is. If they'll just do something. If they'll just use it as a reminder to do a mental status exam. Kind of the same way about our response to disasters. The key thing is simplicity. You've got to have something simple that you can teach emergency room physicians or primary care physicians. If it's biceps, okay, fine, or set up a mental health tent and get mental health people in there. If a way of organizing helps to get the job done, that's well and good, but in reality, I think that it might be worth trying to be a little more flexible and adaptable in the future and maybe giving some thought to the question of whether our tendency to think of mental health as a separate aspect of disaster really is the best thing for all the patients? Craig has commented about whether mental health should be organic, not carved out, but carved in, using today's managed care metaphors. Should mental health be carved in to disaster response rather than what happened in Oklahoma City? It was either a surgical response or a mental health response. Putting those two together has always been a very difficult thing to try to do.

So that's a bunch of loose associations that I tried to do in a few minutes. Maybe I'll just stop now.

DR. BLUMENFIELD: I think the last point that you made really is what strikes me. Getting back to that first example that you used. We all pictured the mental health team coming to an event and, as you point out, the concern is that they might go under the mental health tent. They might, hopefully, as Bob was talking about before and you

were mentioning, visit and be part of the hospital team. But do you think it's practical that the psychiatrists could have been part of that surgical team from the beginning? In other words, if a psychiatrist was part of a surgical team that was set up for the first response, they would have been there and they could have worked even if it had been a primary surgical event, initially. In other words, if all the surgeons were needed and it was basically a surgical event initially, a psychiatrist who was part of the team could have been functioning from the beginning. If it were too late for the surgeons, the psychiatrist would still have been there. Obviously, despite our knowledge and your efforts and everything else, that isn't the case. Could you perhaps respond to that?

DR. RUNDELL: Out of all those associations I just had, I think the two big points I wanted to make were one, patients don't always present as categorizable as a mental health casualty or a medical casualty. I think they easily go together. If you're physically injured, your chances of having a psychiatric reaction goes sky high at the same time. They're not separable, and so I think that answers your question. In an ideal world having mental health assays or getting back to an initial deployment is vital. Several weeks of meetings have occurred over the last year to try to make that happen, but it's hard to convince the people who want deployable modules to think that way.

DR. BLUMENFIELD: Just a quick follow up. I wonder if part of the problem is that we talk in terms of sending the mental health team, so to speak, the psychiatric team at the same time as compared to as part of the surgical team.

DR. RUNDELL: We do a lot of that ourselves.

DR. PYNOOS: Our trauma psychiatrist at UCLA actually works with a surgical trauma team daily. We had a fellowship in trauma psychiatry in which we had a post-gradate resident work with a team. He saw all their admissions and it didn't have anything to do with disasters. It had to do with every day traffic accidents, homicide attempts, whatever else, and it seems to me that we should be doing more training. CL services across the nation have no experience, by and large, working with surgical trauma teams in a sophisticated way that includes what we now know about trauma psychiatry. For example, trauma psychiatry would not look at previous trauma metaphors. They would look at the number of traumatic reminders in the hospital setting. We did a paper

some years ago, a presentation about the reminders of the current traumas that present themselves in the actual hospital room, hospital corridor, and going to surgery and what they actually do physiologically to the individual at that point. We now do what I suppose you call debriefing these days in the ICUs. People that we never used to be willing to see until they had gotten much better, found out that that probably, with no scientific studies, has increased their medical recovery rate.

And the surgical teams have become much more responsive to our doing that. The medication care of surgical trauma patients is, at least at UCLA, a high functioning CL service. These are people coming in with already quite trauma related specific changes in their autonomic nervous system and their CNS and other things which go unrecognized by the treating team. I can give you an example of somebody in the Northridge earthquake. The person who was most affected was a survivor who had been under a parking garage that had been collapsed for about 12 hours. He was brought in and had major surgery, major surgical complications, but we had someone working with them. Even in the course of his lying in his ICU bed, he was asked to describe what it had been like being in this collapsed structure. He described how he had driven through it every day. It had this sort of grid support system. The fellow pointed to the system above his bed which was a grid that looked just like that in the garage. During the aftershock he had been staring at that and nearly jumping off his bed and nobody knew that. We have seen that with IV bottles when they make noises. My point is that there's a role in training American psychiatrists to work in surgical trauma teams right now, but if we could increase the knowledge of the general psychiatric resident we'd be much more prepared to not only be part of the acute surgical trauma team that's out in the field, but the surgical trauma teams at the hospitals where they are now. We've done very little of that.

Second, in terms of your psychoimmunology, we have data that we're publishing on children, adolescents now who were in the Armenian earthquake, and it's something we have not seen in the United States. Half the children in the schools were killed and all of them lost family members. Five years later we've shown they have highly abnormal cortisol responses, betacortizol responses, dexamethasone, and now in our

second stage, that these adolescents have abnormal growth hormones, compared to kids in other neighboring cities. So it's certainly starting to evoke evidence that these are major issues. We don't know what it means in terms of health or development, but it raises the risks of problems, and I'm sure it would be true of some of the adult populations if we studied them, but it would allow us to see a much more combined effort at that point.

DR. MELLMAN: I'd like to add to the support for the integration of mental health with medical services in the wake of a disaster. I'll speak more about this later when I have my turn, but in the aftermath of Hurricane Andrew I had the opportunity to participate in a variety of settings and structures involving mental health relief efforts. Far and away the most productive experience in terms of identifying relevant cases for my type of assessment and intervention was done when we were part of a medical unit. Rather than having a mental health tent, it was more like a mental health table as a part of an overall medical triage clinic that was set up in a supply relief setting. Part of the triage process involved triage of some individuals to attract people with relevant problems. That was the most productive experience I had.

DR. SHAW: I'd like to support that. One of the problems of pre-existing psychiatric disorders may be a little bit mundane, but some individuals no longer have access to lithium and neuroleptics so we really need crisis intervention. There are individuals with pre-existing psychiatric disorder in which the trauma becomes the final straw that kind of pushes them over the hump.

So these are individuals who really do need acute intervention along with trauma related care.

DR. RUNDELL: You know, I asked Frieda why she thought she was seeing so much conversion disorder in the patients she was seeing, but from the medical end, mental health side. This is interesting because it's a United Nations team so it includes people from all over the world. She said she didn't notice there was any particular nationality that seemed to have conversion disorders any more than any other, but she said that she thought about the old saying: it's a lot more palatable if you're feeling like you don't know where to turn or what to do to present to the emergency room saying,

"My foot hurts" than with tears and saying, "I think I can't take this any more." So the mental health table, where there's a gate keeper deciding who's psych and who is not may not be doing the patient a service.

That's why psychiatrists may play a unique role in that we can take emergency room call and prove to our surgical and medical colleagues, that we can actually get in there and do the work they do, to the extent that we have to. And we may play a unique role in those kind of situations where we can do both. There's a quality of life issue. Every psychiatrist you've ever talked to, who gets deployed, said they work harder than anybody else there because they're on two call rosters and working in two different places with two sets of things. So it's also a quality of life issue. If you're a psychiatrist and you're working six months in an area, it's nice if you only have to work in one place.

DR. COHEN: You know, I think you've addressed a very important area. That's the issue of cultural factors about saving face. In the Hispanic culture there's so much evasion, it's much more prevalent. So that again, in disaster, this becomes a major important acute state that could be recognized rapidly when the problem occurs.

DR. RUNDELL: Particularly for Hispanic men, down in Guantanamo, that is the way they present, with a physical problem. They may be very, very transparent to everybody, but that's the way they present.

DR. URSANO: I'm reminded of a couple of points. No one has mentioned the issues of the psychiatric problems involving crush injuries and head injuries for certain types of disasters. Those are the patients that show up. The question arises of the management and the recognition of those cases in the hospital setting. We have few good studies, but certainly the clinical folklore supports the aspects of increased health care utilization after disasters. We have one outstanding study, never replicated, to my knowledge, by Andy Baum, on increased rates of hypertension following disasters. And now the quote two large Wysethians, one was that one of the important reasons for entree of a psychiatrist is because they are a physician and that when you are deploying someone into a disaster you will never get someone into a major disaster who is only going for mental health because the issues are the shortages of space and resources. Everyone who goes carries multiple roles, so the question of having multiple roles is

important. And lastly, there is a vignette, which Lars was telling me earlier this evening or yesterday, about the role of reminders in hospitals. Whether it is the grid over your head or the person next to you who is screaming in vain and reminding you of your own experience, this is an important aspect of autonomic arousal in lots of settings and should not be forgotten.

DR. PYNOOS: It seems to me that in a medical setting and the emergency surrounding, we should do screenings. You can put screenings about exposure after major disasters in all the major centers, including the emergency room settings and others. It's a very simple method of just going out in the waiting rooms, and it can be very helpful.

DR. URSANO: I hope Sally will chime in at some point about emergency room psychiatry and its particular role, both in consultation liaison and in trauma and disasters. I'm glad to have Tom come and take on the broad perspective, the VA and the broad picture of medicine.

We don't know where Dr. Belenky is. We think it's a bad sign that he's not here, because where he may be would be in the Washington Post, such as Yugoslavia for one. We'll find out tomorrow morning if it wasn't in this morning's newspaper. He is a very conscientious person and not likely to miss an appointment. But in the meantime, I thought we might take five minutes to think from the perspective of what you want everybody to do. Make sure we don't forget so we'll can bring it up for discussion later on. Then we'll get back on track at about 10:15 with Jane talking. I know Jane has to leave by this afternoon, so we want to be sure to give it time, and that will put us on time also for Admiral Young when he comes.

Let me give an example of what I mean in this five minutes. Raquel mentioned barriers to psychiatric delivery in times of disasters, and I have now written that down as an issue for us to be sure to discuss later on our agenda.

DR. COHEN: It struck me as unbelievable that after twenty years in the field listening to the same points our models cannot flow forward, models that look so commonsensical. That means there must be very powerful forces that are not allowing us to put this into operation.

DR. URSANO: Any other items?

DR. SHAW: I think the heterogeneity of psychiatric disorders. There's a tendency just to focus on post traumatic stress mentality and not see the wide spectrum of morbidity.

DR. BLUMENFIELD: I think what we were discussing before, the hidden victims. I think for instance, the people who didn't have anybody to care for, the respondents who don't have anybody to care for. Obviously, we know the emergency workers do care for people, but there are others like the members of the media who are there all the time and Red Cross workers. If we just step back and look around at the whole incident, I think we find in every incident groups of people who are really victims, but aren't primary victims. I think we have a lot to offer to those people, so I think that should be part of the process, the stepping back and really looking. Just one example comes to mind, the telephone operators who are called in to get dental records in a plane crash, who had to call up the families and get the dental records. It happened that they had chosen to do that very logically enough. This was a Delta plane crash. They had chosen the telephone operators from Delta, but they themselves were struggling with the idea that they had probably booked those people on the flight. They had been given the task of just contacting the families to get the dental records. It would be very easy not to think that they were also psychological victims. So I think we have to step back and look for the hidden victims.

DR. URSANO: If anything else, I would encourage you to, as Mike was doing and as the group naturally does anyway, to feel free to add a vignette that helps illustrate the point because our goal in all of this is to eventually have a document. Those vignettes, even though it may only be several sentences, may be very helpful in terms of providing depth and richness that will allow us to illustrate a point to an audience that we're trying to reach. There's an audience out there that we have to talk to.

DR. SHAW: I just wanted to mention something else because I think it's important, and that's the phasing in of psychological responses, responses to psychological or psychiatric morbidity. There is a time course, an evolution of symptomatology which requires different resources for different moments.

DR. BLUMENFIELD: How far down the line? We, of course, can think in terms of long term, but when we do research what kind of a long-term follow up do we do? Do we go back a year, a year forward? Do we come back a couple of years later? What's the nature of the research? We certainly all know it never goes away once you've been through this. It might be worthwhile.

DR. WEISAETH: I think one of the problems is that there has been tremendous progress made in traumatic stress research during the last 20 years. It's not been paralleled by the role of the psychiatrist in dimension. I think psychiatrists have been very much clinical specialists. Much of the problem we see in this field is the resistance, for example. We can come back to that. How we are perceived by the public and by victims?

DR. COHEN: And how we train psychiatrists. We start with the sickest patients first and move more and more and more out, but we never get to --

DR. NORWOOD: I'd like to bring up the whole issuing of training medical students, psychiatrists and residents and fellows. I think once you figure out what psychiatrists should know, it would be nice to include that in our training.

DR. WEISAETH: One problem many countries have, you know, is the proportion of female medical students, all countries that have a conscript system are training doctors in disaster medicine as part of the military training. You don't have that problem since you don't have the conscript system, but we have to expand the training of medical students very much in war and disaster medicine because we cannot trust them to do it.

DR. PYNOOS: Maybe a small section, but I think we need to look at academic psychiatry in the role of the university. The way in which funding comes to the state and local agencies in some ways excludes the university, so that in Northridge we have a community that included 30,000 people attending UCLA and 200,000, 250,000 family members essentially all of whom were in high risk areas, and no funding came to the university directly, neither to organize its own services or do outreach. Academic psychiatry has no recommended disaster plan for our hospital. I guess we would look to the California state system which does not include psychiatry in a decision making

process and only so far in traditional roles. I think there are enormous barriers and resistance within larger academic psychiatric universities to integrating the services on a large-scale.

DR. NORWOOD: It reminds me of a point that was brought up about the role now of all these HMOs coming about? How will they participate in disaster response?

DR. DAILY: Coming from the private practice sector, I essentially did drop everything and go to the people that had gone with me on various things we'd done. It is a major issue because the HMOs are not fond of doing any kind of supportive move with this. They don't want to take care, in a prolonged manner, of these people who have been traumatized and want an instant cure in three visits. If you have to ask for a second or third visit, you have to go through a rigmarole. So some type of process supporting the private psychiatry section and going back to the training portion is needed. We hardly ever see a program that actually trains people who are going to go out and be a general adult or child psychiatrist, more training is done with children, my area, but we don't see that training. A few of the major centers do it, but the smaller programs don't.

DR. URSANO: Those are all marvelous points. We have jotted them down. I hope you all have, too, and we will try to get back to them. Please keep them in mind. We'll have more opportunity for broad discussion tomorrow.

DR. PYNOOS: One more area is research, a major issue in Oklahoma after the bombing. Things were essentially out of control. The researchers were coming in from all over the country if not all over the world. The Governor in that case actually made an edict that the University of Oklahoma would be in charge of all research, and anybody coming in had to put it through their human subjects committee. Actually, it's well controlled. There were no extra resources for their committee or anything else. The point is that it affects how people see a psychiatrist or any other mental health professionals when they are reinterviewed five times. The program isn't set up under a clinical model, where they integrate research under a clinical umbrella that recognizes the different stages of recovery. We saw that in a legitimate way and not necessarily in an independent way.

DR. BLUMENFIELD: At the break, Lars and Bob were talking about the role of psychiatrists and consulting about the memorial following a disaster. I think the role that psychiatric consultation can play will be very important.

DR. COHEN: I was asked in a school where three teenage girls had committed suicide whether there should be an assembly or should it just be said through the loud speaker. So that principal did not know how to handle the same thing as the memorial. How do you handle the post-trauma symbolic, traditional, ceremonial with mental health thinking.

DR. URSANO: Very good. Well, we'll continue our brainstorming and thinking. I'm pleased to have Jane spend some time with us as we specifically think through the role of the Red Cross; discussing where they have been active, where they hope to be active, where psychiatry has been involved, and perhaps where it could help out in ways we haven't even begun to think about.

MS. MORGAN: Okay, I want to thank you for the opportunity and I've really enjoyed listening to everybody talk. I'm sorry I won't be able to stay for the full day.

I want to talk a little bit about the Red Cross Disaster Mental Health Services Program, and I know that some of you are more familiar with it than others, so I won't go on too long. I need to give a little bit of framework to see where psychiatry can fit in or to talk about the potential for where it can fit in.

I'm sure most of you are aware that the American Red Cross is chartered by Congress. It is mandated to provide disaster services for preparedness and response. What that basically means is that we do not have to ask permission from any local government or federal government to respond. It is expected of us, and a Red Cross chapter will lose its chapter and cease to exist if it does not meet these requirements and expectations. So Red Cross Chapters, and there are approximately 2,000 of them across the country, are expected to take an active role in working with the local governments, the county, the state, whatever entities are involved in disaster preparedness, as well as to be there as one of the immediate responders as those events occur in an area. That can involve single family fires where only one family is affected by the disaster, all the way up to the earthquakes, the hurricanes, the plane crashes, whatever else might occur.

All Red Cross disaster assistance is an outright gift. It is free. There are no loans involved and all the money is donated. You receive no funds from the government for disaster assistance so it is a gift of the American people back to the American people.

Now we do participate in the federal response plan, and the American Red Cross is the only nongovernmental agency to be a lead agency for an emergency support function. The Red Cross is the lead agency for ESF 6, Emergency Support Function 6, for mass care. Feeding, sheltering, first aid and disaster welfare inquiry system are areas we're responsible for.

The Red Cross is also a support agency to ESF 8 which is health and medical care. We are an agency that can be called upon by the Department of Health and Human Services in their response to the health and medical issues of a disaster.

DR. URSANO: ESF?

MS. MORGAN: Emergency Support Function. Those are different departments, different components of the federal response plan.

In 1989, Hurricane Hugo had a major impact on the Caribbean and South Carolina. Approximately a month later the Loma Prieta earthquake occurred in San Francisco. There were also 22 other disasters going on that Red Cross was responding to at the same time across the country. That particular Fall stretched the organizations resources further than they had ever been stretched before. It was during that series of disasters and immediately following that it became obvious to upper management, and it had always been obvious to those of us in health services, that there was a need for some sort of internal mental health response capabilities. And so in January of 1990, a task force was put together with representatives from psychiatry, psychology, social work and nursing to look at whether there was a need and then developing an internal mental health program.

We consulted with an IMF, the different professional associations, and looked with them at the organization. We decided there was no question that there was a need. So we began to develop a program that resulted in the system that's in place right now. Through that we developed very set guidelines. There's a document that spells out, in detail, the limitations of the program and there is also a two-day course required for

mental health professionals when they work within Red Cross disaster mental health services.

The course is 12 hours long and it's designed for a multi-disciplinary approach to disaster mental health. The course focuses on the preparation of mental health professionals to adapt their existing skills to work within the Red Cross and the disaster environment. They are not taught how to be a psychiatrist or a psychologist, but how to work in the disaster environment, and more specifically within the Red Cross response environment.

Disaster mental health has trained over 2,000 people since we first started teaching in April of '92. Over 700 of those people are enrolled in our national disaster services human resource system and are available to go out on national assignments anywhere in the country. The bulk of the rest of the people are not available to go out for a two-week period of time, which is the minimum expectation for going away from home, but are actively involved with their chapters and their local jurisdictions.

The program itself is designed primarily to deal with our own workers. The overall function of Red Cross disaster services is to provide assistance to disaster victims. Mental health is the only one that puts our workers first, and we do that because our disaster workers cannot provide quality time and service to disaster victims if they're not okay themselves. So our first focus is our own disaster workers.

A secondary, but simultaneous focus, is to provide assistance, mental health assistance, to the affected communities and individuals. We work with the local mental health providers. We will have mental health workers in our shelters and in our service centers where families can receive individual financial assistance. Any Red Cross facility has a mental health worker working within it, who might very well be somebody on loan from a local community mental health agency, a private practitioner, or somebody that came in from another state to help out on that particular disaster.

We work in conjunction with the local mental health providers. We do not try to take their place. Unfortunately, some of our workers get enthusiastic and may put across the other image of, "I'm here, now you can go home," when they're talking to the local

providers, which is not what we want to have happen. It does happen every now and then, and we're trying to correct that.

Dr. Llewellyn mentioned the local chapter versus the national people coming in this morning. That is a very real problem that we have been trying to address for years. We're trying to get away from the image of the national chapter coming in to take over.

The local people get very involved very quickly. They become very proprietary towards the disaster, it's their disaster. These are my victims. And then when somebody comes in, those people are also very tired, they need to get some rest, but they don't want to let go of it. The worker that just got there is too enthusiastic, so you can see how there's some potential for clashes in that particular environment.

The Red Cross disaster mental health program has limited crisis intervention. We do not try to do long-term therapy, in fact, it's not allowed. We're dealing with particular issues as they relate to disaster, and for the most part, dealing with a normal population, whose dealing with an abnormal situation. Our crisis intervention guidelines are for the short-term. A mental health worker cannot have more than two to three contacts with a client before they refer that person to a local resource, whether they be victims or workers. So there are very structured guidelines for what can be done with Red Cross's program.

Our volunteers, and they all are volunteers, I'm the only paid person that is specifically dedicated to mental health that works for Red Cross at this point, are multi-disciplined. They're psychologists, psychiatrists, social workers, counselors, marriage and family therapists and psychiatric nurses. We do require that they have a license in their home state, and we actively work with the different states where disasters occur to make sure that there are no licensing issues when somebody comes in from another state. There are some states we cannot send certain professions because of the statutes that are in force in those states. There are also states that have limitations to time. In the State of Florida, a mental health professional coming in from another state is restricted to five days before having to get licensed in that state. Now we can go around those and get a Governor's order, which is what we have in Florida at the moment to deal with the flooding that's going on in the Fort Myers area.

DR. URSANO: The Governor's order might be issued for a week, a month?

MS. MORGAN: The first time he did it was for 30 days. This last time was for 60 days. So it sets a specific time period and then we have to go back and get another one.

The Red Cross people within the state are working, so it is an automatic part of the package that goes to the Governor whenever there's a disaster, and it will be part of all the stuff that he signs whenever the state has been impacted by disaster. It will be an automatic thing that happens. We're trying to work in the various states. We have problems finding other remedies such as that.

Let's see, I mentioned that workers within Red Cross have to take the disaster mental health services course. They are also required to take a short introductory course in Red Cross disaster training which is a 1 to 3 hours and is offered at the local chapters. We've been talking about ways to work with district branches within APA to make that course available to membership as a way of getting people aware of the program and interested and enthusiastic about disaster services.

We have a two-pronged approach to preparing for disasters in all functions, not just disaster mental health. First, we work with a local chapter and increase the local community's ability to respond to disaster. That is the most important right there. The stronger a community is in responding to whatever happens in that area, the less assistance they will need from the outside. We work in the mental health arena, with the local community mental health providers, the local governmental agency that has jurisdiction for that area, the hospitals, and the CISD teams. Anybody that could be involved in mental health provisional services should be involved on working and developing an overall plan for disaster mental health response. We also need to make sure that the disaster mental health component of the plan is not sitting on the shelf in somebody's room but is a part of the overall disaster plan.

Disaster mental health is still relatively new and not all chapters are aware of it, responsive to it, or see a need for it, so you might very well, if you're a volunteer in a community, have to convince the chapter, just as we have in the conversations we've

been having here, that there is a role for mental health and disaster, and really build and shape what that role is in that particular community.

The second approach is on developing people that are available to go out on national assignments. These would be people that are licensed, that can go out for a 12-day minimum assignment. They can respond anywhere in the country to disasters. As I said earlier, we're trying to recruit approximately 50 right now to go to the Caribbean and work with the local providers there.

Let's see, they have to have met the training requirements. They're assigned through their chapter to go out. We take care of their expenses. We have a travel agency that makes travel arrangements for them. They pick up a pre-paid ticket at the airport. We give them money from their local chapter to cover their miscellaneous expenses. We do the arrangements for rental cars, if they're available, hotel arrangements and everything for them, so all their needs are taken care of by the disaster assignment.

We also have corporate liability insurance so if someone is registered as a Red Cross volunteer, that liability insurance would cover them should any situation occur.

If they're assigned on a national assignment, they would go in. There is somebody who is determined to be the officer, the person that's in charge for the mental health response for that particular operation. These people would work with that officer who is coordinating with the local providers and making sure that all the needs in the community are met.

Basically, that's what our program is at this point. We work on trying to have mental health providers available in our shelters, whether it's precautionary evacuation due to potential, direct threat or whether it's after-the-fact. In the Fort Myers area we have shelters. Three shelters have been opened now for three weeks because of flooding in that area. We're having to increase the number of mental health people that are there because residents are getting more and more restless the longer they're there and the water does not go down.

So we may need a first wave, a second or a third or a fourth wave of people to be able to go in to assist.

In all honesty I have to say that Red Cross has not been real good at utilizing physicians of any sort in their disaster programs. We do have a role for a consultant, a medical consultant at the chapter level and we have two national medical consultants. They're both ER physicians from Johns Hopkins who provide guidance to my office concerning medical questions that might be related to health screenings for volunteers. If someone with a health condition wants to go out on a disaster and we don't think it's wise for them, that consultant will talk to their doctor about whether they should or should not go.

Chapters are supposed to have medical consultants and some of them do and some of them don't, probably more don't than do.

So one role that we had been talking about for psychiatrists to fill is that of a medical consultant in the chapter. Again, you're physicians, you can get in the door that way and then expand into the mental health arena at the same time.

Mental health professionals have a more mixed and limited availability to go on national assignment than most of the rest of our volunteers because of their full-time jobs, whether they work in private practice or elsewhere, so we're really kind of thinking that we'll have a stronger response from psychiatrists on a local level than we will on a national level, which is fine. As I said, the local level is the most important. It's everywhere in the country. We need that assistance greatly.

That local level can involve serving as a liaison with the medical and mental health community, trying to bring those people into the disaster response planning, working with the chapters to increase the level of preparedness of our workers. We've set up a staging area in Atlanta right now where we're recruiting people, and probably close to a thousand all together will be sent to the Caribbean. We have mental health people that will be there working with training people. They will do an orientation for those workers to try to prepare them for what they're going to be encountering on this particular disaster, the isolationism of working on an island, the multiple different cultures that they'll be encountering, the lack of resources, not to mention just the physical hardships since there's no electricity and no running water. We would like to get to these people and tell them all that before they get some place else, before we spend

the money and they get all excited to go somewhere and then find that maybe they're not up to it or it's not something that they want to do or that they're not comfortable or capable of doing. So back in the chapter, if we have psychiatrists that can work with people and prepare them for the psychological aspects of responding to a disaster, people will be better prepared for what they might encounter, regardless of the type of disaster. Also, when they come back from a disaster we will work with them. We do an initial debriefing with all disaster workers before the assignment, but that's just initial, it's just a start, give them some education of what to expect when they go back home again, but then that needs to be followed up more at home.

DR. COHEN: You might like to get some books or some documents from the Peace Corps. I worked with Dr. Kaplan many years ago and guidance was exactly what was needed for helping the volunteers to really think through everything you just mentioned. I think people have forgotten about the psychological preparation of the Peace Corps. There's some very good documents you might like to look at. Dr. Kaplan is the psychologist who developed that with others, but the psychological component was very interesting. Several people after the meeting said we're prepared.

DR. BLUMENFIELD: Along that same line, is there any information or data on the amount or the numbers or the percentages of psychological casualties among the Red Cross workers that go into different incidents, particularly maybe let's say Andrew or any other incident where a large number of Red Cross workers were probably participating? The other related question, do you see any obstacles to that being studied because it sounds like it's a very important question?

MS. MORGAN: Yes, it is and yes, I do see obstacles.

(Laugher.)

They're getting smaller, but they're still there. Red Cross is very protective, very closed -- in some ways, not in all ways, but they're somewhat reluctant and hesitant to have people doing research on them and there are a lot of people that are interested in doing that because it's a ready-made large population of people that are responding to disasters.

We did a couple of internal studies following Andrew and Iniki. Hugo was the first one we studied where the results showed strong evidence that there was emotional distress, that there were problems, but we haven't done the sort of study that you're talking about.

At this point we have a structure in place where someone who wants to do research can submit a proposal. It comes to my office and I'll pass it on up the chain. We've have gotten to the point where they're much more reluctant to okay it if it's about studying our own workers. They're very reluctant to okay it if it's about disaster victims unless we've got confidentiality things taken care of. As I mentioned in the meeting the other day, our national disaster services chairman who is the leadership volunteer at the national level, and responsible for disaster services, has just been appointed for the next three years. He's a psychologist which indicates recognition of the growth of disaster mental health in the organization. I think Jon's being in that position will help in making that happen.

DR. COHEN: What's his name?

MS. MORGAN: John Clizbe, C-L-I-Z-B-E. He's a psychologist from Connecticut.

DR. COHEN: What's his title?

MS. MORGAN: Disaster Services Chair. So at this point, Michael, I have two national mental health consultants. One is a psychologist, Dr. Ruth Barren from Boston. The other is Dr. Jerry Jacobs, who is a psychologist out at the University of South Dakota. They were both very unimpressed with the instruments as well as the analysis, but it's getting a little bit better as far as that.

DR. PYNOOS: There are issues in two areas. One is the very practical issue that the Red Cross and psychiatry at the local level have always had an interface over issues of medication. Shelters, at this point do not provide medications, even substitute psychiatric medications. People with on-going prescriptions are without their medications. That remains a long-term issue of what to do under those circumstances and whether there's a role for that or whether the Red Cross, because of its liability, could ever permit that kind of intervention.

The second issue is whether the Red Cross can start to participate, as is starting to happen in disaster areas in general, not in research, but as part of the public health planning beyond issues of needs, shelter and others, to do exposure screening on those as they exit Red Cross shelters. Then they will actually participate in developing a data base about the type of exposures that people have had, to property, life threat, and personal loss. That can be part of the planning for that region. It would not be a research issue, but public health planning for the mental health consequences in that disaster. It would seem advantageous that the shelters start to participate, as other groups are, in that kind of screening. You can do that confidentially, with regularity and asystemic approach.

MS. MORGAN: I see us moving more towards that direction, and I'm supportive of that and my supervisors are supportive. It's just a matter of working through the heart and getting it approved. We did participate with Rutgers University on a study that they did to look at how people respond to tornado disaster warnings. They contacted people that were not affected versus those that were affected to see what their reactions and responses were, so that they, in effect, okayed that one, so we're going to keep moving.

DR. PYNOOS: For example, in Oklahoma City we originated, within the University and school systems, an actual screening program that anybody might use to triage a person for mental health interventions that they may need. A very simple screening. Everybody's participated quite well. One area that we haven't used and hasn't systematically been done is screening in shelter circumstances.

DR. URSANO: Does the information, Jane, from Red Cross, presently feed into the local planning, in terms of number of people? I'm sure it does informally, but is there a systematic way that that information gets to the mayor or gets to the fire department or gets to the social service agency?

MS. MORGAN: I don't think there's a systematic approach because that will be happening on a local level. We do work on a national level. We will participate with state mental health departments that are putting together the grant proposals for FEMA funding and share numbers and our damage assessment reports information with them. We also participate with CDC with casualty information. We do ask a few questions of everybody who is injured; where were they?, what happened?, how were they injured?,

those sorts of things and every disaster has a report that goes to CDC. They do some analysis and studies from that.

DR. PYNOOS: But that doesn't feed into mental health planning for a region where we know the injured are the highest risk.

MS. MORGAN: We're currently reevaluating our program with CDC so it's probably a good time for us to look for other things that might be able to do that and address some of the mental health plans and needs for disaster.

DR. URSANO: It is such an important move. George has been quoted in a study of which he's the primary author. If I can steal his thunder for the moment in looking at the Operation Desert Storm casualties, when asked the rates of psychiatric distress of those injured, it was around, George, 30 percent?

DR. BRANDT: Thirty-six percent of those injured had some psychiatric concern, either a psychiatric diagnosis or they had symptoms.

DR. URSANO: It gives a ballpark figure which is big. If we said 30 percent of people had TB there would be no question about an immediate outreach program responding to that kind of group.

DR. BLUMENFIELD: Is the debriefing that the Red Cross workers get a compulsory part of the organized program and do they have to do a logging or write their experiences? I saw that on a local level. I didn't know if it was the actual policy, but is it also a verbal group, so-called critical incidents?

MS. MORGAN: Debriefing is not required. However, when somebody is out processing, there are certain things they have to do. They have to go to the staff to clear their voucher, account for the money that they spent and give back whatever they have left of their advance. They have to be exit interviewed by their officer, their functional officer and they have to, on the form, complete a checklist. On that checklist, there is an item, "go to mental health and a debriefing - yes or no".

So they have to come to mental health. They can decline to have a debriefing and they may just check no, but they have to come to the table, and that gives the mental health person an opportunity to try to make the debriefing happen.

Most of them are participating in verbal debriefings. Some departments also require a written narrative description which is a form of debriefing itself.

DR. BLUMENFIELD: The debriefing is in the field as compared to in local circumstances then?

MS. MORGAN: We try to do it all. It depends on what the disaster was and how hard we push it. Then when they get back to their chapter, the active volunteers of the chapter, within a week or so, should contact the individual and do an additional debriefing.

DR. BLUMENFIELD: I want to comment on that. Although, as far as I know, we don't have any hard research to support it, and if there is any, it certainly is important to put it on the table, it's our feeling that that debriefing and the work with people who are workers in the field should be at the time. In other words, if somebody is there for two weeks, it would be better to do it before they leave and before they're back home and checking out. I think that might be a goal for us to strive for. Certainly any report that we assist with in any way can get those kinds of debriefing work done.

MS. MORGAN: When you were talking it reminded me of the Northridge earthquake. We did have a couple of people from the VA and San Francisco come down. Keith Armstrong, who had written an article on the multi-stressor model, which is a debriefing model that we use was there. We got approval for him and a couple of his peers to come for about a week. They did exit debriefings and they also did a questionnaire of people they were debriefing at the same time. That's the first time that that's happened.

DR. BLUMENFIELD: I know that part of the procedure working in the field is often writing logs of your total experience and I think that also is a form of this psychological debriefing, but maybe it should be looked at a little more.

MS. MORGAN: One of the items in our statement of understanding does deal specifically with research and it does say that we will work together and try to do appropriate research, so that it is not something that we're ruling out.

DR. PYNOOS: I think the flip side is that you need to see we can support the efforts of the Red Cross in other ways. The decisions made in the shelter about, for

example, children and sending children a distance to other family members. Things that are going on at that stage may have real effects of co-morbidity and we can provide some real leverage in saying that that can be a very critical time of supportive decision making that can be prevented.

MS. MORGAN: Also decisions about opening a school and moving our shelter. Not just announcing the night before to shelter residents that have been there for two weeks that they're going to be uprooted again and moved someplace, but to have the psychiatrists involved with the shelter manager and the administration in making the decision on how everybody will be informed or what part the people will have in it. There's a lot of consultative roles that the psychiatrists can play on the administrative level to help decrease the emotional trauma of a disaster.

DR. WEISAETH: My point relates to the International Red Cross, but I think it's a general point so I guess I'll make it here. Why did the Red Cross not close down their hospital in Kabul? First of all, you have the competition between nongovernmental organizations, the prestige --

MS. MORGAN: Very real.

DR. WEISAETH: And they were the last ones to close down and they didn't close down until warring parties were, in fact, having a shoot-out in the operating field.

Now the personnel there had very little knowledge about the matter of stress and particularly about how that affects your risk evaluation, secondary disaster syndrome, for example, where you become heroic and feel that this is not dangerous to you. First you will not get doctors and nurses to relieve their patients. That's really the point I want to make. Red Cross should have an organized decision making process so that somebody in Geneva makes the decision based on the reports of how many shells had hit that hospital, for example. I think if you leave the decision making to the relief people themselves, you will have a problem.

MS. MORGAN: Yes.

DR. URSANO: Is there any decision making that actually flows beyond the local? Can you decide the Red Cross won't be there even if the local chapter wants to be there?

MS. MORGAN: Yes, we can.

DR. URSANO: I assume it's not often exercised?

MS. MORGAN: No, it depends on the situation. We had a call a week or so ago. There was a situation on an Indian Reservation where a group of Indians had barricaded themselves in a building for several weeks and one of them had contacted the local Red Cross chapter and asked them to come in and provide some health care for the people. A decision was made that we could not do that, even though there were resources available. There were legal implications for people that were there. The chapter was ready, they had people ready to go, but we basically said no. So we **can** step in, if we know about it before hand.

The International Red Cross has been somewhat slower to recognize the need for mental health for their delegates. They have established an international task force for psychological support and Dr. Ruth Barren, the psychiatrist who is our consultant, represents us on that task force. We'll be hosting a meeting of that group here in January and they have developed some guidelines for Red Cross societies to develop mental health programs. The ICRC, which is the International Committee of Red Cross, the ones that visit the POWs, are more involved in the war type situations. They have just now started doing some debriefing of their workers.

DR. WEISAETH: The interesting issue they raise is that the Red Cross's running this hospital may have cost more lives than it saved because the world gets the feeling that as long as Red Cross is there the situation is not that terrible. It gives a sense of security, but the war could have headed on to more violent space because they were there. This is what the Red Cross people worried about.

MS. MORGAN: I have very limited knowledge and experience of the International committee, although I had personal experience as a delegate on a federation assignment to Kuwait for three months following Desert Storm. I was surprised by the lack of communication and control between Geneva and our particular delegation. We were in a somewhat iffy location and the only decision to pull out, as far as I know, would have been made right there on the spot. There were plans in place in case we had to.

Let's go back and just wrap up a little bit and if you have any other questions we can go on. We have addressed the issue of medication. As of right now, no medication is prescribed. It's not something that any of our mental health providers do or are allowed to do under our standards and our guidelines. However, we can assist in replacing medication if someone has lost a prescription, so there shouldn't be a problem if somebody is also receiving medications and getting those replaced. The other area is education, helping a community know the psychological response, if they're in the tornado belt or on the Gulf Coast, where hurricanes are a potential, or in an earthquake prone area, for example. Helping the community realize some of the normal reactions to disasters and what they can expect to see, and helping them be better prepared are other areas where we can work together. We have educational materials that we utilize now. We have coloring books for children for all sorts of disasters, brochures also, but there's a lot of area for further development in education, getting the word out if a disaster has occurred about what types of responses people can expect to see.

I'm excited. I'm looking forward to working together with psychiatrists. At the moment, of the 700 people at DSHR, I would say less than 10 of them are psychiatrists, so there's a lot of room for psychiatry to become a major player within disaster mental health. Any other questions?

DR. URSANO: Thank you, Jane, much appreciate that. Any general discussion that people want to comment about?

DR. COHEN: There is one experience that I'm facing right now in Dade County. There's a division of Red Cross shelters and there are Red Cross consultants to shelters that have the sickest individuals of a disaster area, a vulnerable population. The county government is going to run those shelters with the assistance of technical people, nurses and doctors, for people who will need chairs or are invalids or have had strokes, but also for alcoholics, drug abusers, mentally retarded, epileptic potential. I don't know how it's going to work out. I've never had that experience. There are meetings going on to try to see, among other things, what role the psychiatrist may have in these shelters for special populations. People are supposed to send a questionnaire ahead and enroll themselves into these shelters and transportation will be provided. Here's a population with

unknown psychological issues. I don't know how we're going to work on it, but it's something new.

DR. URSANO: This is being planned in advance?

DR. COHEN: Right now. The decision had been made several years ago, but it's public, so I'm not saying anything you didn't know. The emergency manager, who was very instrumental, made a whole section into shelters that had no cots and no personnel. Out of that she was asked to become a crisis emergency manager in the Miami area. The whole emergency services have been put under the fire fighters system and a new person is coming in.

I just want to share that as an example of scenarios and of how many questions there are.

DR. URSANO: A dramatic example. I don't know if we actually had an entire hospital to be evacuated in California or not, although I know it was expected that parts and pieces would be. Did that show up in Los Angeles? The questions of shelters for special populations? We're talking about essentially having to deploy from one hospital to another to make that happen, a unique example.

DR. COHEN: There's is a sub model you need to make for psychiatry's role in working with vulnerable populations.

DR. URSANO: Thank you, again, Jane. Perhaps we can go ahead and move on. I wanted to welcome Dr. Belenky who has joined us. He is the head of a division of Neurosciences at the Walter Reed Army Institute of Research and a distinguished sleep researcher in his own right, and also has been exposed, perhaps, more than anybody presently on active duty, the behavioral components of a particular manmade disaster, the issues of war. We'll look for a time to slot you back in, but I wanted to have time for you. I appreciate your coming by. Also welcome Carol Fullerton who is a faculty member in our department here. She has been extensively involved with the research on disasters in a wide range of categories, including particular populations related to spouses, significant others and children.

Lastly, I welcome Admiral Young, the Director of the Office of Emergency Preparedness who is going to speak to us next. I'm very pleased to have you take time

out of your schedule to come and be with us. Many of us have had opportunities to work with Brian, your left arm or your right arm, however you describe it. I am also very pleased that you had here, at the university, just a short while ago, a particular conference which I hope you'll be able to comment upon, directed towards a unique type of disaster, potential chemical and bacteriological exposure, as being a cutting edge issue of concern to physicians in general. I would think of psychiatry in particular in that arena.

Welcome. Perhaps we could go around the room and introduce ourselves. Maybe that would be helpful to you.

I'm Bob Ursano, chair of psychiatry here.

DR. NORWOOD: Ann Norwood, Assistant Chair.

DR. BRANDT: George Brandt, Assistant Professor in Psychiatry.

DR. WEISAETH: Lars Weisaeth, military psychiatrist from Norway.

DR. BELENKY: Greg Belenky, Director, Division of Neuropsychiatry.

DR. SHAW: Jon Shaw, Chief of Child Adolescent Psychiatry at the University of Miami.

DR. BLUMENFIELD: Michael Blumenfield, Professor of Psychiatry, New York Medical College.

DR. WONG: Jon Wong, Psychiatrist with the Armed Forces.

DR. FULLERTON: Carol Fullerton.

DR. MELLMAN: Tom Mellman, University of Miami, Department of Psychiatry.

DR. TAYLOR: Sally Taylor from the Health Science Center in San Antonio.

DR. DAILY: Susan Daily, private practice, Tulsa, Oklahoma.

ADMIRAL YOUNG: We have been working with your group extensively. You know of our last conference.

DR. PYNOOS: Bob Pynoos, Director of Psychiatry at UCLA.

DR. COHEN: Raquel Cohen from the University of Miami Medical School.

DR. NORTH: Carol North from Washington University in Saint Louis.

MS. MORGAN: Jane Morgan, American Red Cross.

MS. LEVINSON: Cathy Levinson. I'm a clinical social worker in the Department of Psychiatry.

DR. URSANO: Welcome.

ADMIRAL YOUNG: Thank you. I'm particularly pleased to be here since we're in the midst of a major deployment. I will describe and use and illustrate some of those actions here.

I have three goals. The first is to show you a view of how the United States responds to health medical and health related social services in both manmade and natural disasters and give you that organizational framework.. I will provide you with an overhead if I can get someone to put that there and find out where we show slides.

Then, based on involvement in essentially all of the big ones except Hugo, I will give you some experiences that I have felt, some based on the literature and some based on personal experiences, in regard to some of the concerns for psychiatry. And then I will, since my profession begins with a P and I was trained by working with my good colleagues John Romano and George Engel, and since I was Dean of the Medical School of Rochester, I will try to deal with what I think is an abrogation of responsibility of psychiatrists in the realm of disaster medicine.

I hope to be both informative, provocative and to seduce you to an involvement in the largest concern that I have, the man-made terrorism which we will continue to work on.

So as I go forward in this, please interrupt me at any time and I will try to answer your questions. Had I been able to have the time separate from the deployment, I would have given you a copy of the slides. I'll get those for you so that you can then have them available.

Let me first, as we structure this, give you an idea of the way the United States responds. The United States has a unique system in that the federal response plan coordinated by the Federal Emergency Management Agency, FEMA, is best looked at as a large holding company with 2,500 people with actions being undertaken by each of the Departments and Agencies. I will show you slide on that. Our authority in the Department of Health and Human Services comes from the federal response plan. The

delegation authority comes from the President to the Secretary for all medical and health related social services, from the Secretary to the Assistant Secretary of Health who is the policy person, and then to me as the action agent. In the role of action agent I have the capacity to mobilize in support 12 departments and agencies. Because in our country, for those of you from other countries, the military is both loved and hated depending on the particular action, the decision has been made that the Public Health Service, which is a fuzzier and friendlier organization to the public is pushed in the lead. We, therefore, task DOD and VA to bring in assets. In some instances we came with the American Red Cross. We are developing, to answer one of your questions, a program of shelters for special needs where HHS, under the emergency support function No. 8, would come into the shelters and provide the health care that you asked about earlier.

We also deal with other departments such as EPA, USDA, etc. But the command and control is very clear and the responsibilities can be tasked. Over the evening I was deploying VA and DOD assets right now for the Caribbean action.

So let me try to walk you through these. I'll do them myself because I want to go fast, but if you could move down the flip chart, I will use that along the way. I would like to relay the fact that a large part of what we see in this public perception problem relates to the very activities of the press. My first presentation will very rapidly give you some feeling of the kind of stress issues. This is Tower Tarrin. Actually, had the individuals done what they wanted to, one tower would have toppled into the other. The goal was to bring down one tower. It was just a misplacement of the charge. Then we see our man of the year. It's hard to get on the cover of Time and here is an example of what is being portrayed to the American people in regards to the terror that you deal with.

Here's a picture that none of us will forget. You had to be on deployment in that particular scene to really appreciate the difficulty of the population. I was there a week ago and saw the fences that I'm sure you saw, with the business cards, the flowers, the personal activities and one of our women, a pharmacist who was there openly wept and you could see that in the eyes of others.

Security is a major concern in many federal buildings. I was talking with and working with the City of Boston and one of the biggest concerns there is a high vulnerability of their buildings. If you look at this one, the Una bomber with a twenty-five cent call could bring down an airport. The Chilean grapes and the FDA activities were two phone calls made to the Embassy in Santiago and the individual had a very unique waste pattern. The first was we are sick and tired of blowing up policemen and cars. We're going to fight with fruit. We ran it through and decided it was a hoax. We published that it was a hoax because it was widely publicized in the airport customs facilities that it was, that it occurred, they publicized before they contacted FDA. When we looked at the first 1250 cases, we found one positive and we were off and running, but the ability to threaten also can cause an accident.

Here's another interesting one, not going unnoticed. The whole concern of safety as evidenced by the blocking of Pennsylvania Avenue. This is a good example again of what is placed in the mind of the citizenry. This is what I'm showing you this collage for, nuclear terror. Cartoon literature best shows what we are dealing with. This is one of the nicer ones essentially showing good retirement for Colonels in the Soviet Union and the tracking that we and others are doing as we work with the movement of this around the world. Lest you think we're immune in the research laboratories, the concept of P32 and the water supply have been widely expressed beyond the danger, but again worker intervention in all likelihood or some other intervention.

Ebola in a town and you saw the panic that occurred in the United States with travelers and how we look at quarantine dealing with that particular issue. And here, a committee that I chair is designed to look at the sale of cultures. At this time, you could forge your home address as this gentlemen did and call it a laboratory, send in for an American-type culture collection with just a little slip which I did not put into this that said I'm a laboratory and a qualified microbiologist and get anthrax, mycobacterium, tuberculosis, etc. So we're trying to see how we increase both the protection, but not decrease the university and other access to organisms.

Now if you look at this collage of world events, I'd like to show you a single plan that is going to be adapted to both natural and manmade disasters. In the case of the

federal response plan, the actions by FEMA, the Federal Emergency Management Agency are to manage and coordinate and provide the mission of science to the various emergency support functions. You can see by looking at the clock that there are 12 of these. I've had the privilege of working with Red Cross, and I really want to congratulate you on your excellent program. You can also see transportation under the Department of Transportation. The one that I'm particularly talking to you about is health and human services. You can see that we are supported by American Red Cross, AID, EPA, FEMA, General Services and I'll come back to each of these, National Communication System, USDA, Department of Justice, VA, DOD and DOT.

Through the mission assignments, for example, I don't have the ones since Friday. At around 2 o'clock in the morning we had received and fulfilled almost $2 million of mission assignments that are there and I will describe the deployments. But this is an integrated program and because we have worked together on so many disasters, this really is highly coordinated.

DR. PYNOOS: I notice the Department of Energy is not there.

ADMIRAL YOUNG: That is going to be corrected. Following our conference which you mentioned, we had the first deployment for terrorism. Since medical is going to be the dominant issue during our first 72 hours, we are the lead organization for biological, chemical and nuclear terrorism and the Department of Energy is in this.

I will not go into that because time does not permit the specialty, but I will give you a brief overview and that's why I've got the flip chart there.

Now if you look at the functions we undertake in emergency support function No. 8, health and medical related social services, these are the ones. I will use the last deployment as an action to indicate what we have already done. Health surveillance, one of the earliest things that we do is get a team on the ground and work with the local commissioner of health, commissioner of mental health, the variety of health and health related activities. Yesterday I had two calls with the Commissioner of Health. He went out with our New York regional emergency coordinator who was in charge of that particular area of the Caribbean and with a member from the Center for Disease Control. We got the information back and based on that we started deploying assets. Health

surveillance is key. We found endemic diseases, dengue, and they did have outbreaks of hepatitis A recently, water borne diarrhea disease with 500 children in the last two weeks, Yellow Fever and hemorrhagic fever are low, but present within some of the other islands. Health workers in the Caribbean are particularly vulnerable. Dengue is endemic. The advice that has to be given, we sent out early to the individuals so that they would know. People come in with long-sleeve shirts and the answer is no. Did they come in with cover protection? Did they come in with mosquito repellent and the tents and are the sleeping facilities in the tents, does each individual have mosquito netting? The likelihood, no. Mission assignment to get that type of net for workers, yes.

Okay, so we would look at that. Medical care personnel. We have deployed five disaster medical assistant teams from USUHS. Kevin Yeskey is on the plane, he went down there with PHS and DMAT. We brought in the DMAT from Massachusetts, from Indiana - I'll describe that system of private/public and airborne while we're speaking - should be Kentucky and Ohio. That was based on the assessment of health needs.

We have a medical support unit that coordinates the entire operation for all of these functions. They are on the ground with two 18 wheelers and they have dune buggies so we can move around and take our things that will be coming from St. Croix. They landed late last night. Our biggest problem is transportation. One of our C-5s sat on the runway for 24 hours, trying to get out. In a deployment that is a rate limiting point. Shipping may be possible, if time permits.

Health and medical supplies, you drop in what the hospitals needed and we'll continue to back up. Patient evacuation. We thought that was going to be necessary. It's not required as one of our responsibilities. In hospital care, worker safety, that's a weak area. I'm going to drop all the way down to the one that's circled, mental health. The ones that are circled are some of the more interesting ones and those we had just a couple of weeks ago at Oklahoma City, one thing that you would not usually expect to see. I had an overall conference which included a part on disaster assistance teams and the coroners office and the other was mental health. Why? Because we're seeing reactions of the individuals that worked on the bodies with mental health concerns, so I brought those two together. The groups usually do not interact.

This gives you an idea of where we've been in the last few years and now we'll color in again the Virgin Islands. We had been heavily deployed. If you were to look at this as a function of years and where we have taken our people from, you can see that as I describe our teams, we have disaster medical assistance teams that we mobilized 46 teams in three years to deal with these issues. I'll describe this private/public partnership as we move into this.

This is designed to emphasize that all disasters are local. The Tip O'Neil concept, all politics is local, all disasters are local and therefore we go in and support the local government. We are under the command of the local government, so it is the Commissioner of Health that will assign us where we go and what we do. The commission assignments are built together. At the current time in Oklahoma, Bob Vincent and I are working on the proposals that will go to the recovery programs.

Now within this system a national disaster medical system is a subset of emergency support functioning. There is a bit of a nuance here that I would like to just spend a moment on. We're asked in Emergency Support Function No. 8. The Red Cross at No. 8 has is a primary agency and supporting agency, really the primary agency responsibility and separation from the supporting agency may be fine. Not so in the disaster medical assistance. The program that we have, the National Disaster Medical System, is a partnership and one of the partners HHS is a leader in that. We meet on a monthly basis. We are very close in our interaction and very committed to each other. This system was built to supplement state and local medical resources during disasters and major emergencies and to provide medical support for the military and VA medical care system in overseas time frame. Those are the two actions that we have.

Please interrupt me at any time because I will be going fairly fast through a number of things.

Now if you open the envelope, what do we do? HHS is the administrative lead. Sometimes it becomes mixed as to whether we're working out of ESFA or NDMS, but I try to keep it as clear as possible. So for example, yesterday, or the past few days, I've been speaking with a retired major general, Joe Gray, who heads a VA program which is getting ready for mobilization. We have activated the federal coordinating centers, the

center in that region is a VA-run center. We will have a biomedical engineer coming over today as part of the NDMS response to look at the equipment from San Juan, Puerto Rico. VA has already obtained the airlift and we will be bringing over some Hispanic speaking nurses to meet the mission of $450,000 for the two teams and for the VA nurses.

DOD provides patient tracking, patient evacuation and does some of the federal coordination system centers. We have approximately 118,000 beds that we can access over the nation and at any one time in the private hospitals, by working through this particular system. As soon as this disaster occurred we notified that we may need to evacuate patients. We notified the federal coordinating center in Puerto Rico to stand by for evacuation. We did not have to evacuate.

VA, an alternate emergency operation center, is the federal coordinating center in which they have over half of the patient reception. When we bring these patients into these federal coordinating centers, you can look at them as a hub of a wheel and then there are private sector hospitals around them. So we can literally bring in hundreds of thousands of beds as required and this is a support backup for DOD. We're prepared for this in Desert Shield, Desert Storm.

FEMA helps us with the training and education and exercise program. So the dominant concerns are medical response, patient evacuation and patient care.

I'm going to keep this one on and come back to it. Now how do we organize this? There are over 5,000 private sector health workers, physicians, nurses, psychiatrists, psychologists, mental health workers, intensive care individuals that are organized into 60 teams; 21 of those teams have been based in the areas of highest risk. If you look at the East Coast, these are level 1 teams which I'll define in a moment. Here's a hurricane risk. Here's the earthquake risk, part of the earthquake risk on the West Coast. Our level 1 team has these criteria: (1) they must be able to be mobilized in six hours. The fastest that we had was Oklahoma City in which the head of the EMS called me up and said I don't know what is going to happen. I'm really worried. Get me a team. Three and a half hours later, in Tulsa, Oklahoma, the DMAT was on the ground. These people are pre-registered with their GS ratings. They've already said "I

do." When the bell goes off we notify them. Last night I was talking with Kentucky and Ohio and we were moving from an alert to activation when the 400,000 came in for their portion of the mission assignment and then working over the evening and still working with TRANSCOM to move the C-130s out of Kentucky and in with that air frame. We spaced them second to move because we didn't want to put in all the medical assets at one time. So we can alert them within six hours and with the driving distance, another six hours we can be there. Two and a half hours after the Northridge earthquake we had moved into March Air Force Base and were staged there in the State of California. How long does it take the 44th Medical Brigade out of Fort Bragg? About 72 hours. They come in with wonderful things, flag furling, down the ramp, but we hold the Alamo for the first 72 hours. That's our responsibility.

Now these people are wonderful. They train on their own costs. We don't have to pay them to call them into active duty. We don't backfill them so their sponsors eat the problem. And they're neat guys and gals who love to help other people. Fantastic group of individuals. I couldn't be more pleased with this type of a response. In fact, our limitation is not on people. We can't provide the basic load to them because of the costs. It costs about a half million dollars to provide the basic load per team. Only 10 of our 21 teams are fully equipped.

Now what does this mean, full equipment? A basic load, tentage, capability to be on the ground for 72 hours without resupply, so when they go, they pull the standard pharmaceutical load out of the hospital. We have pre-agreed arrangements with the hospital. They pre-fund the standard load with a commitment that we will reimburse them and out they go with standard pharmaceutical; the perishables, the standard IVs, whatever it is and provide that basic load. Out they go into the field and are capable for existing there for 72 hours.

Now what do we provide? We provide their malpractice. That's not a problem. We provide their licensure over the nation and their workers comp and we pay them at about one quarter to one third of what they would get in private practice. They're usually on the ground for 10 to 14 days.

Interestingly, these folks are incredibly committed. With no problem I was able to get the Indiana and Massachusetts teams up and ready. The only difficulty was the air frame. Air frame is a major problem. I want to try to deal with that in the aftermath. But airframes are very difficult.

We have a number of levels, two and three DMAT teams. I'm going to describe these for you and show you how we do the operation and integrate it for you.

Level 1, has 21 teams fully deployable and it even has 100 to 300 people. We usually deploy in groups of about 35 to 40. We have a call down of 3 to 1 and we will at the time determine what we wish that we made -- speaking to the Commander Paul Rega, I wanted an enriched nurse-doc team. When we deployed the PHS DMAT we wanted some mental health workers on that. We had four or five and we had seven sanitarians. So at the time, depending on what the action is, we format the team differently.

When we go into a disaster, the level 2 teams go in primarily with their own selves and a small medical pack. So there were five teams deployed out of the eight in California. California exercises the DMAT teams with their emergency plan. We brought in the teams that were fully field equipped, a total of ten, but the DMATs from California that were fully field equipped were mobilized to adverse condition sites. They're there in their tents, able to work out. Other teams we brought in worked in our facilities or we broke them out to do outreach in the parks. So we can mobilize a level 2 team to either do special missions or, since we provided the supplies and equipment to level 1 at the end of 10 to 14 days, we have them leave their supplies and equipment and the level 2 teams come in to the tentage, the site where we had level 1. Level 3 teams are specialty teams. We can dialyze 150 people in the field in tents per day. We have burn units. We have pediatric units. We have mental health units. We have psychiatric units, and depending on what the disaster is, we bring these as level 3. I'm going to describe a level 4 team in a few moments as we deal with terrorism.

DR. WEISAETH: May I ask the difference between a mental health team and a psychiatric team?

ADMIRAL YOUNG: One has more psychiatrists than the other. I will nail my mental health concern in a few minutes, but I'll jump ahead by saying my biggest

dilemma with mental health is no one has organized this turf of antagonist individuals. My greatest problem in the entire event is dealing with mental health.

Back to the teams. What do we mobilize this time and why do we mobilize it? We took the PHS DMATs because that had the largest amount of truckage that I could get on the ground very rapidly, loaded that into a C-5, two 18 wheelers. We thought that it was likely to come into the coast so we held back the Winston-Salem which has a large amount of truckage and did not deploy that. We took the Indiana team out of Fort Wayne and we deployed also the Toledo, Ohio and the Kentucky teams, leaving our coastal assets intact.

When Emily was coming up we moved forward to Winston-Salem and we were two hours from treatment on the coast. Now a good team can triage and treat about 2,000 a day according to their estimates. I don't go that high. My calculation is about 700, but they do claim that they can treat that many. And treatment is designed all the way from very acute to primary care, which is usually the case in about 85 percent of the cases.

Okay, so that's the philosophy of how we look at those. The hurricane is the easiest because we can watch it coming. The same is true with the flood.

Now if you look at the overall response and I've already given you most of this, it's a volunteer group. We have the best of American medicine. This is the private sector. Usually, we deploy in 35 members per team. Now for example, New Mexico has 300 people. We can carve out usually three teams out of the New Mexico DMAT

DR. URSANO: Admiral, a couple of people were asking (1) how does one volunteer and (2) when was the mental health proponent added or increased?

ADMIRAL YOUNG: It's been original in the team. I'll give you the details on the mental health. That's something that I'm trying to augment now, but we do have special mental health teams that came out specifically. After Andrew we did bring in some individuals to look at and study some of these activities.

DR. TAYLOR: They're part of the Level 1 team?

ADMIRAL YOUNG: Mental health, no it's level 3. All specialty teams are run by Susan Griggs who is Assistant Professor at Massachusetts General, and she formulates

the specialty teams and that would be Level 3. We bring them in in association with other teams.

Now if you look at a disaster site, one of the problems that we have is the first 24 hours or 48 hours of flying blind is terrible because all the phone lines are down and we only have a limited number of satellite phones. We have more than anyone else, however, and in fact, a lot of what we did yesterday was to take one of the satellite phones at the Marriott and allow people to call out to their relatives on that when we weren't using it otherwise. We'll have a list to fill out back and forth.

The disaster site is a determinant and we will interact directly with that site because we have precocked and loaded mission assignments and standard packages before the 48 hours when the disaster field office is set up. That's a very important concept. We have to have preloaded packages. Ours consists of an MSU with three disaster medical assistance teams. That's how we launched immediately here.

Then we deal the patient care into that and we have the environmental health. I'm just showing two of these because these are surveillance, mental health, other assets that are there. We do patient evacuation which can go to definitive hospital care as part of our system and then we coordinate between the disaster field office and the medical support unit. In military terms this is our forward advance control unit.

That's the fundamental unit. I just told Paul to report in to Gary Moore who is Commander of Field Operations at the MSU. He should come under that to the best of his capability because I requested they be kept there.

Medical support unit looks at where supplies come. We may get them from DOD. We may bring them from VA. We may bring them from Perry Point. It depends on what's successful. We've already activated the Naval spray unit for vector control and that will be mission tasked in about another week, so that's the broad caricature and I'll give you more detail. If you were to look at this as a disaster, collection points, we have a local field office, that brings in our DMATs, our special teams, our support units, our supplies and equipment go into that site. We have deployed the mortuary capabilities three times in the last two years. We have the headquarters which I operate from command and control, ESF-8, as well as an emergency operation center. This time it's in

New York City. We did not need evacuation in Airhead, but we could do that. If it's a large one, I deploy to the ground as I did in Andrew and work the operation as office-in-charge for 8 weeks. Depending on what the action is of the two that I did personally as officer-in-charge of the midwest flood and Hurricane Andrew.

We have the federal coordinating centers where VA and DOD play key roles. I couldn't be more pleased with the way VA has operated. Joe Gray has made that accessible and all assets in VA hospitals can be used. We frequently go, as we did in Oklahoma, to the VA hospital for our MSU and locate there. Otherwise we are forward position as we are here under austere conditions.

I'll give you some examples of mission assignments: health care and social services, we used AOA, DOD, VA to provide that in Hurricane Andrew. We also had mental health. We went to the National Institute for Mental Health for that, and we had the vector control at CDC and DOD.

In the midwest floods we went to VA for crisis counseling. The Public Health Service paid the Department of Veterans Affairs for the individuals and we used that out of Iowa cities. We shop around, I shop around for the professionals that are necessary throughout all of the SFA and then bring them together at the right time and at the right cost.

So that's the way the system is. If you look at the Northridge earthquake, we add crisis counseling. We use in that case FEMA support and SAMHSA. So it depends on what the issue is. In Oklahoma City, we had difficulty in that the mental health organization was not as well organized. We recommended that we fund it immediately. They demurred, and in our conference they requested that we lock and load the mental health piece at any disaster in CONUS. The local health officials are given no option and launch will occur. That's the policy that will be in place. That policy was in place for everything else except mental health and we've now added mental health to a pre-assigned mission.

Now to show you where the dollars have gone, actually mental health for both emergency response, this is separate from Brian Flynn's operation. Brian Flynn does a beautiful job on this. This is HHS funding and his comes directly from FEMA. So this

is HHS funding for the mission assignments from FEMA outside of the crisis counseling and HHS dollars. Our offices manage the budget for $250 million to the various agencies since '92. That's what you see here.

As you look at this, the three of the four largest actually come through Human Services. Specialty services for children and families, for aging and for SAMHSA. HCFA, Agency for Children and Families and HCFA and AOA go out in blocks.

You can see there's quite a lot of disease surveillance. NIH is there. We'll have a big mission assignment for HCFA because the St. Thomas Hospital was substantially damaged. We will negotiate with payments to the hospital and we will be able to supply the equipment and we will consult with FEMA on the rebuilding of the hospital.

We are a one stop shop for the nation. Emergency preparedness, emergency response and recovery. A staff of 24, $2 million budget coordinates for the nation and we expand like an accordion at a time of disaster and deploy a number of individuals. The largest task that we have is the DMAT teams. How do you become a member? It's based on where you are. For example, we would welcome all significant contingents from the psychiatry department at USUHS to join our PHS team. You're right there. We can bring you in, you're out the door with us. What do you have to be able to do? Phone rings, drop where you are and you're gone.

A view of what I think the responsibilities are for mental health. One of the key ones for mental health is outreach. There is a critical incidence debriefing which we gave a substantial grant to in Oklahoma City. I think that's worked very nicely and those people have some interesting interactions with the crisis counseling people.

Prevention, I think, is a separate issue. The need to understand what works in preventing mental health illness. No one owns that as near as I can see at this time. Education is greatly stressed. There's a great interest in most of the materials that are put out.

The common things that I have seen are listed here. I'll have to manage patient care personally. Where was it now, in Georgia. It was a terrible thing. There was no other doc around at the time in the disaster field office. I have not managed psychiatric patients for a long time. I had to go in and deal with this. This women was sending and

receiving messages from the fourth floor in Saudi Arabia and Israel. She was convinced that there were bad forces and good forces. She was trying to save both her husband and her son who were being maligned. Now imagine being there, not able to do a history. There's no history of medication. There was no ability to do a physical. Just myself and a nurse. I kept the police out who wanted to incarcerate her and take her to jail and tried to get her husband who was not available. So we provided support and were able to calm her and get her then reasoning more clearly over a four hour period. When she was down, I left her with a nurse and went out and located her husband and sent her home by ambulance. Now, did I need to send her home by ambulance? I don't know, but I felt I would not let her husband drive her in the event that she got violent or another worker who had volunteered to drive her and would be in one of these states and grab the wheel.

The reason that I'm saying this is that you have to be prepared as you like it to jump into some mental and emotional aberrations at a time of the disaster because you may be the only doc there. You may be the only health professional. Cognitive disorders, I have seen these exacerbated. And it's hard to distinguish between 2 and 3, but at Andrew we had one person who is a fairly significant health professional, but thought he was getting messages from God on what to do and he was going to direct the operation of this particular message he was receiving.

And physical problems. In Georgia, I do not have any control studies. We're trying to follow this up. On a two-day period forty percent of the individuals that I followed had blood pressure running a little over 150 over 100 to 110. We felt that that was a substantial stress problem and we did set up a health unit in the DFOs for both the physical and mental health. That's an area that we don't do well. What are the unresolved issues?

To me, the number one issue is whether the effect of mental health intervention can be measured? I'm going to say it twice. Can the effect of mental health intervention be measured? There has been no systematic attempt until Oklahoma where I requested and got the funding to look at this. We had spent substantial amounts of money on these actions. If you look at SAMHSA, this is in excess of $39 millions of dollars that have been spent. We don't know the outcome for that.

We're now trying to look and see. The messages are conflicting. One, a group in Aberdeen thought the most important thing was the command and control at the disaster site. There is no significant benefit from the intervention with immediate post-event crisis counseling. I don't know. We have not followed that.

Are there any predictors of long-term mental health problems that can be identified during counseling and debriefing? One of the problems we had in California, where not a single dollar was given in mental health, the only time we could not get the budget, was the fact that the individual in the administration trying to deal with that said, "show me what the baseline is and what the increased need is and we will fund it." It could not be done. In Oklahoma, we'd been able to do that because fortunately the group looking at the responders gave a report a few days before the event. We're going to do post-event analysis and we've got some very interesting studies that I think will come out of Oklahoma. I'm really pleased with what that's done. I got with Bob Vincent very early and said, "Bob, these are going to be a problem. If we can't do the measurement, we'll never defend anything." I think we're going to have some excellent work coming out of there.

What preventive measures should be initiated to minimize domestic violence and substance abuse? We have some good figures out of Hurricane Andrew and out of the State of Missouri that the amount of domestic violence, particularly child abuse and spousal abuse went up by a factor of 4 in the immediate aftermath. That's the only data that we have. The most tragic, tragic one was a mother who took her two year old and invited her friend to come with her and drove the car into the canal. The friend got out, the baby was strapped in and the mother perished. We had about two teenage suicides in that population in South Dade prior to the Hurricane and the number went up afterwards. Playing Russian roulette with a loaded gun, sitting down in the middle of a highway is the type of thing we saw.

What could be done to minimize this? Can a standard emergency response program be enough for mental health? I have a preloaded thing for what I did for CDC, for environmental health, for DMATs. We have no pre-cocked, loaded issue other than to send in some technical advisors.

What should we expect for 10,000 people involved in a disaster? Can we come up with that?

DR. COHEN: Can you define what a pre-loaded component is?

ADMIRAL YOUNG: Sure. If a disaster strikes, such as a hurricane, and the normal hurricane package out of the door is a medical support unit with its 18 wheeled truck with dune buggies. We're going to be able to get around on St. Thomas because we have four wheel drive dune buggies with carts behind it. Just load our stuff on. No trucks or cars may be able to get by, we'll just wheel that thing around. We have our medical supplies, our equipment and we would activate three times at a minimum of 35 members per team. If a disaster occurs, gone.

DR. COHEN: Pre-loaded means?

ADMIRAL YOUNG: It's all pre-approved. It's all pre-approved by FEMA. The mission assignment is there. Pick up the phone. Work with the ROC, regional operations program, as we deal with that and say that we need it, $800,000 for the first one, $400,000 for the second one, $100,000 for the C-5, not questioned. Out it goes.

DR. COHEN: But a mental health pre-loaded would mean the number of people we might need? A group of people that know what to do?

ADMIRAL YOUNG: What you tell me is you would come and bring me a proposal that says to respond to mental health needs this is what we think we need. That's what I said to the folks in Oklahoma, come up and tell me based on your gift to the nation because you're beginning to do it right. Come and tell us. Help us pre-define this and I bring it to FEMA and say this is what it is. This is separate from Brian Flynn's excellent program. Remember Brian Flynn's program is five crisis counseling sessions and you're cured. It's the program for normal people acting normally to an abnormal situation. It's five counseling sessions declared cured and doesn't do anything with long-term needs. Doesn't deal with substance abuse, so the rest of those come into our actions.

DR. PYNOOS: I wanted to know how you deal with that in terms of FEMA and the short-term, what you're pointing out.

If someone is seen as a long-term issue, what would the funding come under?

ADMIRAL YOUNG: HHS, and that is done through a supplemental program. Because there are no predictors, you can go from California with immense needs with dollar zero to what we just did for the Georgia flood, small flood, $7 million for mental health. Okay?

There are no predictors that I can put hand over heart and say this is what we need. I can tell you what's necessary for vector control, primary care, for FDA. We're able to get $56,000 for eight inspectors to go in to condemn the contaminated food and medicine. I'm not sure what I'm going to do in mental health in St. Thomas because I can't say what good you do.

DR. PYNOOS: I worked closely with Bob Vincent in Oklahoma. We set up a very good risk screening school. We can show that in the Northridge earthquake from the school system program, which was the most well-supported program, that if you actually screen by exposure and stress, even a year later, that half the children the FEMA program was seeing they were seeing at high exposure and high risk and continued the stress. There's a total other group that they've never seen at all that was in the school system. They never actually systematically screened for exposure and distress among the general population of school students. It's catch as catch can.

ADMIRAL YOUNG: I couldn't agree with you more. Remember, and maybe I didn't say it clearly enough, Brian's program is a small piece of the Stafford Act. What comes out in the long-term research and the court actions come out of the Department of Health and Human services. Now, following Oklahoma, because Bob Vincent has done it very well, we will make a presentation to the administrator with some people from there. I've already pre-briefed a meeting with the Deputy Secretary. It's very important that you realize there's one organization that's the 911. And if you don't work through the organization that does that it doesn't get there.

When I was running a hospital, Strong Memorial, we did an analysis of the acute bacterial and subacute bacterial endocardidigies management. What we clearly know is what should be done. I don't remember the percentages now, but a significant number of antibiotics weren't changed when the blood come back in with biotic resistance. The length of treatment was not followed, so if you had to guess the afferent limb and not the

efferent limb, it's not going to work. It's got to come through the ESF-8 to give me the ability to work with them.

DR. BLUMENFIELD: In your initial, this is a little provocative statement, in your initial going in, you've included, I'm sure, morphine and people who can administer the morphine and people who know how to diagnose the pain and treat the pain. Even though you might not have any long-term studies that are showing that if you relieve their pain or if you don't relieve their pain they're necessarily going to have morbidity down the line.

Correct? I say you're doing the pain because as physicians you'd want to relieve the pain. Well, in the same way if the people are suffering psychologically when you go in, I think you can make a case that you should be treating the immediate psychological pain and the intermediate psychological pain even if we don't have long-term studies yet to show that their morbidity down the line is going to be high or low.

ADMIRAL YOUNG: I have no problem with that. My problem is that I have no consensus and no group that is working together to deal with this. With a fractured factious group of mental health providers, I don't have a standard of efficacy. I work all the time on this. I launch what I launched after speaking with the health commissioner, but with so much divisiveness in the group its difficult for me to bring it together.

DR. BLUMENFIELD: I just want to be sure we weren't holding up the immediate psychological response because we couldn't prove the efficacy down the line.

ADMIRAL YOUNG: Not at all. We held up the immediate psychological response in Oklahoma, correct me if I'm wrong, because when I went to the people in charge and said I've got money to launch individuals, I've got money for technical assistance, I've got money to bring it in and then we'll do follow-on studies, the answer was "don't come now."

In the after action, the same person that we spoke to earlier said "oh my gosh, that was the wrong advice, come in, bring the technical team to sit beside us and help us." So I now can deal with that in an organized fashion. But if I don't get the data, it's just like anything, you can have all the wonderful studies in the world, if it doesn't come to the decision makers that are going to deal with that, it's like a nonstuffing --

DR. PYNOOS: One of the things that's missing in terms of children is you don't have a Department of Education up there. You go into supplemental assistance.

ADMIRAL YOUNG: That is correct.

DR. PYNOOS: And it's turning out that most of our school-based intervention after disaster is probably the primary site.

ADMIRAL YOUNG: I would agree with you.

DR. PYNOOS: And someone at the Department of Education who got to the Northridge earthquake, turned out to be very critical.

ADMIRAL YOUNG: Right. If you remember in Florida where I did that, I was the officer-in-charge on that. We did a school program in a school-based outreach and we did the same in a Midwest flood. I funded both of those, but in the absence of data, it's harder to do. I could do it in the program in the hurricane because as officer-in-charge I could sit down with the state health, and mental health worker and I took them around with me on my chopper and we went around. We made rounds together and we devised a program together. In the absence of that close interrelation, the Oklahoma City problem, we're not going to get it off the ground at ground zero. If you don't get it off immediately, it will crash and burn.

DR. SHAW: We have considerable data actually for Hurricane Andrew where we had a Region 6 with 39 schools. We had an inter-school based program where we could show an immediate aftermath in a hurricane. Now whether it's the result of intervention or whether it's a generic shock like effect of a hurricane, it's hard to know, but all behavioral indices of the emotional behavioral problems went down relative to the previous year and relative to a comparative group north of Miami. Anti-social disruptive and covert disruptive acts went down for two or three week periods after the hurricane. Now how much of this is a result of intervention and how much is kind of the normal course of psychological response to disasters is not clear, but we know that 21 months after all indices of behavioral and emotional problems went up. This is comparable to McFarland's study with Australian bush fire kids in Australia. Your comment about suicidal behavior reminded me of the ABC and CBS news teams all coming to Miami and publishing these incredible news accounts of how suicidal behavior went up

dramatically and the data doesn't support it. In fact, suicidal attempts by males went down by a factor of four in the year following the hurricane. Suicidal attempts on women stayed about the same. So there's no evidence at all that suicidal behavior went up.

Now the real interesting data that we found was that if you looked at the peripheral area which was 40 miles north, those kids got worse by a factor of 3 to 4 in terms of behavior, emotional problems, and in terms of reported disruptive acts and that remains somewhat unclear. Now there was a flight of refugees and families to the north of Miami and there may have been some mobilization mental health assets from surrounding areas that came into the active area, but in actuality people on the outer concentric circle seemed to suffer rather dramatically and have culpable levels of mild to moderate PTSD to children in the impacted area. I think there is data out there, the question is how to get it to you.

ADMIRAL YOUNG: That is the reason why in the middle of a deployment it drove me to be here so I could be provocative with you. I think the mental health community needs to bring this together, needs to publish it, needs to do what you're doing here, hold this symposia, to bring this before the nation's decision makers so it can be of help.

DR. MELLMAN: Regarding the questions you posed on your final transparency, I think with regard to the first, third and fourth there's substantial uncertainty as to what the optimal interventions are, although I suspect that literature is coming out, something coming out in the near future will make a lot more sense of it. I think we have to be cautious about embracing the debriefing model as an answer.

ADMIRAL YOUNG: I don't know what the right answer is.

DR. MELLMAN: Although we do need to do things that theoretically make sense, with the knowledge we have, there's substantial information available as to what the predictors are of adverse, long-term mental health sequelae. I think it's a coherent picture that comes out. As Dr. Pynoos has mentioned, exposure variables are very potent and there seems to be a complex, but coherent equation of personal risk factors, certain pre-existing psychiatric morbidity which is common in our society. That's an important

risk factor, exposure, social support systems, early carnicity predicts late carnicity. We know that as well, so certainly we have a knowledge base by which people of greater risk can be identified and attended to, even if there's not a completely coherent picture about what to apply. I think we know something about that.

ADMIRAL YOUNG: My expectation would have been that the mental health community would have done clinical studies, held symposia, stormed down the doors of SAMHSA looking for support to define what really works and doesn't work. And that's why I'm so delighted to see this program here because it is what I've been looking for. As you know, I went out to Bob Vincent very early and said these are the kinds of things, help me answer these and I can help you. And that's what we're in this process of doing. To me, the Oklahoma situation will be the first that I'll be able to pull together, small location, smaller group of professionals and it's in the number one area that I'm concerned about. I left this here particularly to be provocative. Well, what are my recommendations?

DR. URSANO: Perhaps this group can offer to serve as an advisory group to assist in that --

ADMIRAL YOUNG: I'd be delighted, ecstatic.

DR. URSANO: I think they would be pleased too.

DR. PYNOOS: For example, Oklahoma is a good example where we have enough world-wide experience about the interplay of trauma and grief to actually redefine what was happening there. There are a lot of trauma counselors and others coming in, primarily trauma people, who are screening. As our studies have shown already, there's a total interdependence, but independence between those within a certain zone of distance from the actual explosion and those who suffered immediate personal loss. You need two very different intervention programs.

ADMIRAL YOUNG: Right.

DR. SHAW: You also have to distinguish between what's a well circumscribed stressor in time like terrorism and a hurricane where there's a multiplicity of secondary stressors that go on.

ADMIRAL YOUNG: Of course, and I tried to lay this out. What is my number one recommendation to you? It is to define the rules of engagement among the professionals and at the site.

This is the number one thing I went to see Bob Vincent about as early as I could to define the rules of engagement, being mental health professionals. The number one issue and Dr. Ursano, you can help me tremendously.

Develop a research proposal to determine the measurable outcomes of natural as contrasted to manmade. Just your very last point.

Develop a training program for disaster response on stress reduction. We're putting people in harm's way without really having to and we're doing it over and over again.

Ascertain the long term consequences on mental health so I can get a prospective budget. Where we have a mosquito-borne disease now, because of the Midwest flood study, I can go out and say you invest this many thousands of dollars in looking at the larvae and trapping mosquitoes and setting out programs and I've got an amplification of 15 to 20 fold in reduction of St. Louis encephalitis. We didn't have that before. We did a $2 million well study and I can now say if you dig a private well in a flood prone area this is the likelihood of contamination of this well compared to that well and we used atrozine as a proxy for pesticide. We used E. coli for fecal contamination and we used nitrates for fertilizer and we looked at aquifer for contamination and we can say based on this, this is what we think on aquifer contamination and here's the parameter. Then we added California and Georgia to it. What can I do in mental health? What can be the research programs to give an indicator?

DR. BLUMENFIELD: Do your response teams carry on on-going research?

ADMIRAL YOUNG: No, we are not funded to do that, but I have the ear of the Director of SAMHSA and the Secretary because I represent the federal government, the medical and health social services and I can go and say as I have, this is important. I can't devise a program, can't fund, but I can carry the water as I did with Bob Vincent and said let's get this put into place and I'll do my very best. I can't promise it, but I'll do my very best to get this.

DR. BLUMENFIELD: What I meant was I understand that that's perhaps not the mission, but the reason research has to be done on the front line and you're going in on the front line --

ADMIRAL YOUNG: That's right, if I knew what needed to be done, I could make that a standard mission assignment.

DR. BLUMENFIELD: If that's possible.

ADMIRAL YOUNG: Since it's not defined, I can't do it.

DR. SHAW: One thing you know you need to do is have an exposure instrument. You need some kind of instrument which will measure the degree of exposure.

DR. COHEN: We could have multiple centers for research all over the country if we all got together and had one research design for possible centers where disasters happen.

ADMIRAL YOUNG: Absolutely, would help us immensely.

DR. COHEN: We have tremendous data, but it's fragmented and with very different instruments so we could start prospectively using the same instrument in the whole country.

ADMIRAL YOUNG: In a disaster, I have to have a single medical examination form. Each team can't go in and do its own.

DR. WEISAETH: We developed a European questionnaire and translated it into all languages and applied it to get support from all countries. We reached the finals, but we didn't make it, but we have the idea.

ADMIRAL YOUNG: Very important, very important. I would also think the easiest thing for you to do as a profession is to analyze the consequences. I'm amazed at the number of disasters that go on without analyzing this. I want to show you something that we're playing with that should be of great interest to you when looking at getting the standard mission assignment. If we look at natural disasters, there is one natural disaster that is unpredictable. In other words, you see the hurricane coming in, you can watch the flood, you follow the forest fires, but the earthquake happens in no time and you're off and going. In terrorism, there are those that go bang, Oklahoma City, Tokyo, Trade Center. These become key issues.

So if we now look at the function of time and stage deployment, in the case of the flood and the hurricane, you've got a build up of assets where we're bringing assets as a function of time. In the case of the earthquake, because there are local assets that know pretty much how to respond to that in California, New Madrid, it's an increase that's more rapid, but one that the local communities are used to dealing. In the case of terrorism, we have to be ready, immediately.

Our response window for chemical agents and nuclear agents is 30 to 90 minutes in. Maybe 180. But cyanide, serin, vx, that's the time frame. In some situations, our time frame is 12 hours. In this, our time frame is 30 minutes to 180 minutes. I'll be meeting with QSEC the central US consortium on earthquakes. We're defining and have already worked on the 12 hour piece, and we'll meet with California the next week. We did that at our last NDMS meeting. We have just received the money from HHS to develop our metro team or our first level 4 DMAT team in the Washington metropolitan area. Now what is this going to look like and why am I mentioning it to people who deal with mental health problems?

The team will have about 300 health professionals selected from Northern Virginia, from Southern Maryland and from DC. This team will have as a criterion the ability to be on the ground in 30 to 180 minutes under the command and control of whatever Washington sets up. It could be fire rescue. It could be DMS. It could be police. And this group is to go in and provide the health care assistance. If there was a red zone, a yellow zone and a green zone and you go in with HAZMAT to the red zone only, you can expect these teams to be here to do triage, decontamination, etc. and be there within 30 to 180 minutes. This will have HAZMAT people, DMS folks. It's going to have primary care. It's going to have the specialty training of NDC.

I personally feel that mental health should be included. And as we build this, I will build that into it, although I've been hard on the profession, you're looking at the ideologue who has the strongest support for mental health and the need there. I've tried to be provocative on the other side, but I'm going to include mental health professionals in there.

When I was speaking to Josh Lederburg, he said I should speak to you as we build this team, so I will and am now. These teams then will be reinforced by enhanced DMATs that will come into this zone in about four hours to six hours. They're strategically placed then. We're looking at pre-hospital care as the dominant issue because the hospitals can be overloaded very rapidly. This will be the national model. I have the charge of determining what the team will be in other areas as well.

This is a very important activity and we're just getting underway on it now. So I look at, if you will, coming out of the Romano-Engle issue and being one of the founders of the Western Reserve curriculum that looks at the whole person. I'm not looking at the liver at 4-C, the kidney at 5 West. I'm really trying to look at helping individuals cope with disasters. I find that the only place that the entire health care system comes together is in disaster medicine. It's a privilege to try to integrate this because we see this spike that goes up that takes care of the entire person. So that's the challenge that I look to. I've tried to be provocative. It is not out of a lack of love of the programs that you deal with. I'm trying to motivate the recommendations that I have here. Rules of engagement, the research programs to determine measurable outcomes, the stress for workers there, for long-term consequences and to analyze in a way that can be published. I'm going to hopefully, if I get enough time, start writing articles with a professional in each of the professional areas so that we can start putting this out and building together on experience and cover the literature with a number of these general articles to send the clarion call for professional action.

I thank you for letting me take longer than I should. I have gone way over my time and into your lunch time. I hope I was not too mean in trying to bring my feelings forth and I hope that you'll join the efforts, particularly because I'd be doing this right now, building this team right now. This is the back entry to the other teams that will be coming off where you have not been included to date. It's a very great opportunity in the Washington area. I truly invite your participation to help me on this.

Any other questions?

DR. BLUMENFIELD: Is there a minimum amount of mental health presence on the first team or can there be none unless you've made a special effort to bring them in?

ADMIRAL YOUNG: With the exception of the USPHS DMAT, the first out the door which we build ourselves where there is mental health, and when I go in and say I want you to bring some mental health professionals, we have to bring in special mental health teams. Those are the two exceptions.

I would prefer to have some more mental health people on teams. We've had to do it on the specialty approach so that in the case of Northridge earthquake and in the case of Andrew, we activated mental health teams that come in.

DR. BLUMENFIELD: Is it a question of room? Bob mentioned before sometimes there's a space issue and perhaps the mental health person would have to be prepared to do nonmental health work?

ADMIRAL YOUNG: No.

DR. BLUMENFIELD: That isn't the issue?

ADMIRAL YOUNG: The issue has been that the receptacle, remember I said we come in under local command and control, the receptacle has not said bring us mental health care immediately. What we've now got is the agreement to have a technical assistance team of mental health specialists that goes in when the MSU goes in. We roster them as part of the medical support unit from now on.

DR. COHEN: Could you please tell me of the role of psychiatrists in a disaster? I think everybody has a great contribution, but we're grappling in these next two days with the role of psychiatry. Can you share with me some of your experiences and maybe some thoughts about where you see us positioning ourselves?

ADMIRAL YOUNG: I don't know enough about this to answer your question with the intellectual honesty of actual experience. So what I'm going to answer your question on is clinical observation.

DR. COHEN: Whatever, anything helps.

ADMIRAL YOUNG: I'm pleased if you let me do that and realize that I'm trying to give you one person's observations that may not be real. I will do so.

I think psychiatrists have abandoned this field. I truly look towards leadership from the psychiatry professionals and have not seen that very frequently.

We had a very good integrated program at Rochester where we did have the marriage of internal medicine and psychiatry and mental health and social workers. But the leadership clearly was psychiatry, in this hybrid between internal medicine, psychiatry and social work. I have not seen that model widely duplicated over the nation. The third point is I've not seen psychiatrists playing an active and leading role in the dirty trenches of state and local health as it relates to mental health. And that field has been vacated.

I'm not sure other than watching Bob Vincent's incredible social skills how he was able to become the champion for mental health and be accepted by the practitioners of all those professions. I think he's done that successfully.

DR. COHEN: He has.

ADMIRAL YOUNG: He has emerged in this leadership role, incredibly gifted individual. He's not a psychiatrist, I believe. Psychiatry did not play a major role side by side with him until after he had emerged.

If psychiatry is to play a role here, it has to, in my opinion, capture the leadership in studies, in coordination in bringing others into the tent and trying to play its appropriate leadership role. As I've watched psychiatry from my vantage point as vice president, I've seen it move away from the more socially involved areas to high specialties of profound intellectual interest, but vacating the daily field of the integrated person. I do not believe the Archie Bunker model, dead from the neck up, but it seems that we have that portion of medicine that deals with the neck up and that portion of the medicine that deals with the neck down. I firmly believe that we have a whole person. I think psychiatry can play an enormous role in there.

The last observation that surprised me is I would have expected psychiatrists to jump into this field of disaster medicine and say, "wow!" This is one of the more active things that could happen post-Freud because we could look and see how people interact with a variety of environmental and social stressors. And we'll put a large portion of our intellectual cannon power here because we're going to find something new. I've not seen that happen. That's why I'm just delighted to be here. There is a wealth of material to be plowed here. As I said earlier, when you look at the disasters, you have to look at mental

health, disease surveillance, environmental health, physical medicine, and intensive care hospital medicine all at the same time. It is a profound way to do what we did at Western Reserve and carry the organ system further to the whole person. I would have thought and hoped my message to you here is that psychiatrists should lead the charge or be part of the charge in looking at this. My impression is that the most common thing that I hear is if we can't be sure that we're going to get some money, we're not sure we want to put the bother in to do it or something. No other professional says that to me.

What does that make this doc think? It makes him think that unless I know the outcome, I'm not going to enter the field. Patient first? Doesn't send that message. Unless I know who is going to get the scratch, I may not play. Coordination of services, doesn't say that to me. I'll come when I want to, not there when it's dirty and bad. Health care provider in tough and adverse situations? No. These are the messages I'm trying to factor and what I'm trying to lay to you is how can you help me? I can't deliver large amounts. I have a $2 million budget. I don't have a research budget, but what I am is a direct representative of the Secretary who directly responds to the President and I am in the highest levels of government in dealing with this. That's my responsibility.

I run a virtual corporation. I have no assets other than a very small group of highly dedicated people and they mobilize, hopefully the nation, to respond. We've been waiting.

DR. BRANDT: I think part of what you're commenting on is the huge paradigm shift. We are largely a science of the individual and understanding the individual. We're being asked to shift to the community because disasters are truly illness communities. How do we extrapolate simple issues of indicators? I know what to do in an individual set. How do I measure accurately when the community is ill? How do I measure the effect of my intervention in that community and get at some form of community measure? I can tell you the number of cholera cases and imply from that there's something the matter with your water and sanitation system. I can figure that community health problem out very easily. How to get an accurate measure for community mental health, I'm not sure I have that at this point.

ADMIRAL YOUNG: That is the paradigm that is of great interest. The thing that fascinates me in this is I read and pick up the commentary section in the Washington Post and it says crime doubling in teenagers in the past decade and by the year 200X it's going to double again. Society is interested in just what you said. They're interested in how mental health, how psychiatry, how health in general influences public health. They haven't articulated it that way, but that's what the whole Medicare/Medicaid/welfare issues are dealing with. They're dealing with huge population concerns and you're right, we're there sort of looking at the onesies and twosies.

DR. WEISAETH: I tend to disagree a bit with you because I think as a military psychiatrist, we are trained to evaluate total function.

ADMIRAL YOUNG: Better in Europe than in the US

DR. WEISAETH: We deal in military communities, and morale and the individual is the exception in a way. The group and the unit are what we're used to. While in civilian psychiatry, I agree with you.

ADMIRAL YOUNG: I'm talking about the civilian. I'm not talking about the military.

DR. WEISAETH: This is one of the reasons why disaster psychiatry came out of the military.

DR. BELENKY: We in the Army have sort of two on-going things, one is more clinical and the other is what we call human dimensions research teams. These are folks we send in to Granada, Panama, Desert Storm, Somalia and more recently Haiti, and these folks, the human dimensions research folks go in and sort of measure generally what's going on in groups. They look at what we call horizontal cohesion, general well being, symptoms and so on and are able to feed that back pretty rapidly. In Haiti, we fed back within a week. That's the fastest we've done it, but it's got to be much faster.

We are now working to integrate that with clinical services. We have a battalion in Macedonia at cross border posts and so on. It's quiet actually. We're implementing sort of long distance psychiatric support through video teleconferencing and those sorts of things. What we're trying to do in the next six months is have one of our human dimension research teams go and make an assessment so they have sort of background in

which you could then place the individual who comes to you as the identified person with the problem. How that's going to work, I don't know, but we're going to do it. It seems to me this is relevant to all these issues because on the one hand you want to do a case by case identification and on the other hand you really are going out and looking and seeing the level of distress, where the pockets of distress are and identifying stress in groups as well as individuals for intervention. So I think this has really been a very interesting presentation and gives me a lot to think about in terms of our efforts.

ADMIRAL YOUNG: I thank you for letting this doc who makes house calls on the nation give some war stories and be a bit provocative. I hope that I didn't insult anyone too badly, but I wanted to try to get a clarion call of what I think is an enormous need for mental health and psychiatry and psychiatry leadership.

Dr. Ursano, I look forward to working with you. We will try to make sure we deploy you to some of the hostile areas so you can see it first hand and --

DR. URSANO: I hope the group as a whole can serve as an advisory group to you in capacities that perhaps we can work out that might be helpful. Much appreciate your coming and talking to us; for being informative as well as being provocative, both of which are very helpful, as you know, to conference groups as they try to do their work. Thank you.

ADMIRAL YOUNG: Thank you.

(Applause.)

SESSION II

DR. URSANO: We're going to let Len do most of the talking. I thought Len, we might go around the table and at least mention who is here so you can have some idea. I can tell you that we've had a talk from Jane Morgan this morning on the Red Cross, the institutional picture and we've had a talk on the NDMS system. We've had a talk on disaster medicine in general and on consultation liaison.

We're pleased to have you with us.

DR. ZUNIN: Thank you.

DR. URSANO: As you know, I'm Bob Ursano, good to hear from you again, Len. We'll go around the table.

DR. ZUNIN: Okay.

DR. NORWOOD: Ann Norwood.

DR. BRANDT: George Brandt.

DR. URSANO: Perhaps you can say where you're from.

DR. BRANDT: Ann and I are both from the Uniformed Services University. We're assistant professors and she's the co-department chair.

DR. WEISAETH: Lars Weisaeth, I'm a disaster military psychiatrist from Norway.

DR. BELENKY: Greg Belenky. I'm Director of Neuropsychiatry at Walter Reed Army Institute of Research.

DR. SHAW: I'm Jon Shaw, I'm Chief of Child Adolescent Psychiatry at the University of Miami School of Medicine.

DR. BLUMENFIELD: Michael Blumenfield, professor of psychiatry, New York Medical College in Valhalla.

DR. WONG: John Wong, I'm from Singapore and a psychiatrist for the Armed Forces.

DR. FULLERTON: Carol Fullerton. I'm on the USUHS faculty in the psychiatry department.

DR. TAYLOR: Sally Taylor. I'm on the faculty at the Department of Psychiatry at the Health Science Center in San Antonio and I want to thank you for returning a questionnaire I sent you on behalf of the APA committee on disasters.

DR. ZUNIN: Aha, you were the one.

(Laughter.)

DR. MELLMAN: Tom Mellman, Department of Psychiatry, University of Miami and the Miami VAMC where I'm the PTST program director.

DR. DAILY: Susan Daily. I'm a child and adolescent psychiatrist in private practice in Tulsa, Oklahoma.

DR. PYNOOS: Bob Pynoos. I'm Director of the Child Psychiatry Service at UCLA.

DR. ZUNIN: Hi Bob.

DR. PYNOOS: Hi.

DR. COHEN: Raquel Cohen, University of Miami Medical School.

DR. NORTH: Carol North, Washington University in St. Louis.

DR. HOLLOWAY: Harry Holloway, Associate Administrator for Life Sciences for NASA, also a Professor of Psychiatry at USUHS.

MS. LEVINSON: Cathy Levinson, Clinical Social Worker at USUHS in Psychiatry.

DR. URSANO: Len, that covers the table. We're pleased to have you here in voice, if not in person, and I'm glad that we could at least get this time with you.

DR. ZUNIN: Thank you.

DR. URSANO: Specifically, Len has had direct experience as a psychiatrist with the Red Cross and I think can help us understand better both where psychiatrists function now; the pros and cons and how they might function in other areas perhaps with the Red Cross.

Len, the voice box is yours.

DR. ZUNIN: Well, actually my work has not been with the Red Cross. My work has primarily been with FEMA. I've been directly involved in mental health recovery efforts and worker stress management following many of the major disasters in the last

six or seven years, such as the Loma Prieta, East Coast, the Hurricane Andrew, Santa Barbara wild fires, East Coast winter storms and Northridge earthquake and Oklahoma bombing and so on. But my work has been with FEMA, both as a trainer in training their stress management cadre, developing the training program for that cadre, and in direct services. It has been to develop and implement stress management programs in various sites, such as disaster field offices, in the aftermath of some of the major disasters.

So that may put in perspective where most of my direct service work in the aftermath of disasters has gone. I've also in my capacity as Assistant to the Director of the California mental health system conducted a variety of training programs for selected staff over the last five years to respond to both community disaster situations, shootings and disasters in general that would occur in the California area, so that we also within the State Department of Mental Health have a cadre of pre- trained pre-volunteered workers.

I am not exactly clear with respect to the charge of your committee. I understand it's to develop a small publication outlining the role of psychiatry in disasters for psychiatrists. Am I correct?

DR. URSANO: That's in the right ballpark, Len. We were asked by Brian Flynn's office in SAMHSA to please help him consider where psychiatrists could best fit in, what their unique contributions in the field of mental health might be and in that process, to develop a document for him that could be used to both educate up and down the chain as well as out to our professional colleagues through the committee of the APA. Raquel Cohen who is here, is the chair of that committee, and most of the members are here as well.

So it is specifically the contributions of psychiatrists at times of disaster. That is a rather broad statement as well as a narrow one, and we're interested in your thoughts on that in all directions.

DR. ZUNIN: Let me begin by just making some broad comments with respect to what you just said. I'll just think out loud for a moment because I don't want to spend time, as I'm sure you don't want me to, overlapping what you've already discussed and

have input on and are already clear about. But certainly any kind of pamphlet that is dedicated to the profession would be of great worth. We are a profession, as I'm sure you all recognize, a johnny-come-lately on the disaster scene in terms of the psychologists who have really organized, I think, at a state and national level earlier and have gained some important footholds in this arena.

I first see that just a few thoughts. The recognition that discipline training certainly does not prepare the psychiatrist or any other mental health discipline for disaster work and at times may actually be contrary to necessary and proven approaches in disaster response is really paramount. I've seen, as I'm sure many of you have, many unfortunate situations where well meaning mental health professionals, untrained in the aftermath of disasters have stepped forward to really make a mess of things and to create barriers which impede both individual healing as well as community healing efforts.

I also think that the area of disaster work, in my experience, is a wondrous opportunity for a productive, effective and coordinated approach with other disciplines, where recognition and support for overlapping skills can be demonstrated. The unique skills of each discipline can be drawn upon and respected, as well as their unique training and experience. There are unique areas for each discipline and significantly overlapping areas. Already this has gotten to turf issues, and sadly it has. I don't think it's too late to turn that around and make this sort of a hallmark with a demonstration project at a national level where the disciplines are working in a coordinated and effective way to get together. I think one of the problems of psychiatry in dealing with disasters, as I've worked with a variety of mental health people over the years in this area, has been the difficulty of psychiatrists in focusing on healthy people having normal reactions to an abnormal situation. I think that the psychologists have had some difficulty with the same problem. They're seeing large numbers of unusual reactions and whether they see it through the eyes of pathology or the eyes of normal coping mechanisms is quite critical to the healing process of the individual and the community, as well as the acceptance, which is always tenuous, of mental health intervention.

I think that its the need for flexibility of services in ways and places that are different, where the therapist really needs to be addressed. Again, I say with the de-

emphasis that the therapist is the healer of the sick. The multiple roles of the therapist and disaster work need to be addressed as an educated consultant, advice giver, group and individual focus, crisis intervention, grief counselor and so on.

I think new parameters of the role of the psychiatrist need to be reviewed, such as socialization, and even be part of the function of a psychiatrist in a disaster. Certainly in a disaster field office where you're having intermittent social functions, if the therapist involved refuses to tend them on professional grounds, it is very, very different and can be problematic and create barriers. Referrals and confidentiality issues have similarities and great differences at the time of disaster. Dress code, hours of work, the de-emphasis of the office model and issues of outreach, the knowledge of the program structure, whether it be Red Cross, FEMA, state office of emergency services, knowledge of the structure of various organizations that respond to the disaster, that is important in being able to render the best possible aid.

The psychiatrist may also be away from his or her home base. There are requirements for written accountability that are different than the traditional, so there are many, many differences in the rendering of effecting healing efforts in the aftermath of disasters. And the last thing that I'll mention at this moment is the issue of remuneration. I think it's a hard, sobering fact and I think one of the reasons that psychiatry has not gotten involved in disaster work. I don't know how many of you at the table are volunteered and how many of you are salaried at this very moment. This is always a question for psychiatry and many psychiatrists interested in disaster work have been reluctant to get involved because they see it primarily as a volunteer effort and a very strenuous one at that.

I think that issue has to be addressed. The psychologists, as I'm sure you know, in their paper, the American Psychological Association, said, I have it here -- "the American Psychological Association has developed a national network of psychologists to work side by side with the American Red Cross and other relief groups on site of disasters to provide free psychological services to disaster victims and relief workers." That's under the fact sheet of the American Psychological Association.

So I think to ignore the issue of remuneration is to ignore a significant issue and I want to cite that.

One other thing that comes to mind before I finish this sort of opening thing, the issue of medication. That is certainly an area that is unique to psychiatry and yet it is in itself a highly controversial area in the aftermath of crisis, stress and stress situations, which medications, should medications be administered and so on. I think psychiatry would do well to come out with a paper or some kind of statement addressing a position on the use of medications in the aftermath of disasters and major traumatic events.

So with that, let me just stop at this moment and see if you think I'm on the right track in my thinking, because I still, I am not entirely clear as to the nature and scope and goal of the document that you hope to produce out of this.

DR. URSANO: You are definitely on track from my perspective. Let me see if there are any questions or comments from around the table.

DR. PYNOOS: Len, this is Bob Pynoos. Maybe you can say a little more from your experience of the role of the psychiatrist in working with state departments of health and others and how psychiatry has not been very visible in those kinds of areas, but you've had some good experiences with that.

DR. ZUNIN: First, there is the work with different populations, Bob, that psychiatrists have worked, as you know, with victims, with families and friends of victims, with workers and workers that are from within the community and some workers from outside the community. For example, in the Northridge earthquake at the disaster field office there was an aftershock of 5 point something on the weekend and I suddenly realized that most of the people in the building were workers from out of state and had never experienced an earthquake. And as I quickly moved from the building in the aftermath of that aftershock, many people were totally immobilized and anxious for brief periods of time and had no semblance and no ability to respond in a constructive way because they had no prior training and had never experienced a major earthquake. They were totally unprepared for it.

So workers, whether they be from within the community, or outside the community are important and require different kinds of orientations. So first it depends

what kind of group. Second, malpractice issues and ethical issues are very important for psychiatry. This psychiatrist is a bureaucrat. Let's say I am employed by the State Department of Mental Health. I have malpractice insurance through the State Department of Mental Health. When I've gone to a disaster site, sometimes I've gone with an agreement from the State Department of Mental Health, sometimes I've gone directly on contract with FEMA. FEMA has no malpractice insurance. I don't go as a psychiatrist. I go as a stress management consultant. I do not do psychotherapy so that the role and the reason psychiatrists are not in high profile is two-fold. One, you need to be in low profile because you're not doing, you're using some of your skills, but you're using a different semantic structure and indeed a different orientation. So, and secondly, you're in low profile because the collective disciplined arrogance is really a barrier to effective work and responding to both victims and workers in the aftermath of disaster.

I think it's important that the label psychiatrists needs to be in lower profile. People do not like to see themselves identified as needing help, but as having access to enhancement of their own coping skills.

DR. PYNOOS: In addition to what you're saying, you've worked with state commissioners of health and others in devising a psychiatrist's role in disaster planning. The politics of that psychiatry has been pretty absent on the state level and in most of the state's planning for disaster response. You've had some experience with that. What would you recommend are the issues to be addressed?

DR. ZUNIN: In disaster planning, mental health issues typically have not been addressed. I think most of you know that the federal government has two different programs. One is the crisis counseling program and the opportunity to apply for immediate and regular service grants to put together a mental health program for the victims in the aftermath of a disaster. That is well known and has been established and is part of the Stafford Act and so on. What is new and where psychiatrists have an opportunity to become involved, is focusing on the worker. The workers have been ignored until the last few years and only with the experience of workers having evidenced signs of cumulative stress reactions that have really interfered with their effectiveness and function has the bureaucracy sought to put together stress management

programs for the workers. But the mental health efforts and the pre-disaster planning with respect to mental health in any of the states that I've had an opportunity to work in is sadly very thin and is not well crystallized..

I don't know if you feel some of the states have a more structured and effective mental health response in a pre-disaster planning mode, but I haven't experienced it.

DR. URSANO: Any thoughts, comments around the table?

DR. TAYLOR: I have a question. This is Sally Taylor. One of the things that I have found out is that California and Texas may be the only two states who in their public state mental health and mental retardation department, have a hired, full- time coordinator of disaster services. One of the things I'm trying to do in Texas is to get that person talking with the president of our district branch through the APA and also to the executive director of our district branch. I have had a little bit of success, at least the two of them have sat down at the same table. Do you know of anything like that, a memorandum of understanding or a working agreement between those two factions and California?

DR. ZUNIN: Between other states?

DR. TAYLOR: Between the California district branch and the APA and the State Department of Mental Health and Mental Retardation, whatever it is that you call that.

DR. ZUNIN: No. There is no working agreement between the APA district branches and the State Department of Mental Health where there is a memorandum of understanding and a pre-arranged plan. There is none.

One of the problems also in terms of even the disaster coordinators, the disaster coordinators do not tend to be psychiatrists, of course. Some of them, for example, California's disaster coordinator, Linda Thame is an administrator. She is not a mental health professional in any discipline. So she deals with the development and the implementation of the crisis counseling grant, but her expertise is not in the area of mental health. It's in administration.

Most states don't have a disaster coordinator. I think just Texas and just Oklahoma are talking about having one.

DR. TAYLOR: I was just amazed, as I've shared with the committee that Texas had anything that wasn't 49th in the United States.

DR. ZUNIN: Well, Texas' disaster coordinator is quite new. I think he was just brought on at the most a couple of years ago.

DR. TAYLOR: Right, November of '94, I think.

DR. ZUNIN: And I think he was brought on because Steve Shon who is the Director of Mental Health in Texas used to be in my position in California, so he worked with many disasters in California and knew the advantages of working with the disaster mental health coordinator for the state, Linda Thane, who has been very effective, and wanted to create something similar in Texas and did.

DR. COHEN: I'm Raquel Cohen. As you know I started working in the disaster field before FEMA and the Mental Health Act, and then when the Mental Health Act came and we obtained money for crisis counseling, slowly, slowly the field began to design what crisis counseling is.

At this point, it is getting very narrow with conditions that crisis counseling should only be three or five sessions at the most by the FEMA grant. My question is this, do you think that after 20 years we should review this whole area of crisis counseling and maybe come up, if it is feasible, with a different way of spending federal dollars for assisting people after all the new knowledge we have accrued in 20 years? Is that a possibility of doing and what are your thoughts about it?

DR. ZUNIN: Well, I think because of the high expense and unprecedented cost of crisis counseling for two or three disasters over the last couple of years, as you may know, there was an IG report reviewing the whole crisis counseling program. Now, that would be the first step to see if you could get a hold of that report. I don't know if it's still in psychological format.

DR. COHEN: I have read it.

DR. ZUNIN: You have read it?

DR. COHEN: Yes.

DR. ZUNIN: Then, Raquel, you can see that that begins to address in all probability some of the issues that you're raising. Now part of the reason three to five

sessions are defined is it's three to five sessions to help someone deal with normal coping strategies. If someone needs more than that, the presumption and I'm oversimplifying it, but the presumption is that there is a pathological process going on and that person needs referral to a more classic or traditional system.

DR. COHEN: That's what I'd like to raise, the presumption of things, I think the research we know are still part of the disaster and second that in a community that has lost some of this treatment backup, these people may be left in a way in a worse situation.

DR. ZUNIN: We are.

DR. COHEN: But I wanted to raise a question. Is there any possibility of relooking at this model within the FEMA culture right now?

DR. ZUNIN: I certainly think the possibility is there. I don't know if it would have to be recommended from the APA to Director Witt himself, but I certainly think if the Association felt that a whole review of this subject did have significant merit at both a clinical level and at an economic and practical level, I think it could be done and I think it would be quite noteworthy if it was recommended by the APA.

DR. COHEN: Thank you.

DR. URSANO: Well, Len, we're coming to a time boundary. I want to thank you for your contributions which have not only been clear and lucid, but well organized, which is very helpful to us. You've raised several topics for us to continue to discuss. I'm glad you were able to take time to be with us and I know you had a very busy schedule. Next time we'll have to do this by satellite so we can have a video hookup as well.

DR. ZUNIN: Okay. I wish the Committee luck and I'll be looking forward to the end product. I think it will be a very important contribution and one that is well needed. Thank you for including me.

DR. URSANO: Thank you.

We're going to move on to our next topic and speakers which we have a tag team duo to move us forward. Lars, we introduced earlier. As most of you know, he is the Professor of Disaster Psychiatry at the University of Oslo. He is also a very gracious

host, if anyone wants to visit Norway. It's a fine spot to see a wonderful group of researchers at work that span a wide degree and background. Dr. Harry Holloway is a product of our own, one of my major mentors and former chair of the Department of Psychiatry here, former Director of Neurosciences over at WRAIR, former Deputy Dean and now the Associate Director for Life Sciences and Microgravity at NASA, so he has wide ranging experience with disasters.

We'll let Dr. Weisaeth and Holloway figure out how they want to tag team this and it's an open discussion on international contributions. As you might imagine both of them have been broadly involved from issues of Kuwait, Yugoslavia, Armenia and some disasters that we haven't heard about and probably won't because they can't be talked about.

DR. WEISAETH: Well, if I should start, my starting point would be that mental health work in disasters is a part of disaster medicine. Not everyone will agree with that. They would feel that we are sort of defining it with dollars. One consequence of this is that I had to fight the medical association in Norway when we created a disaster medical association. Under the medical association, full membership is only open to doctors. I fought to open it for associate memberships so that other categories could become nonvoting members, otherwise what happened in Sweden would happen to us. You get one association for medical doctors and a much larger one for other groups of personnel; ambulance drivers, psychologists. As we heard earlier today, disaster medicine is where everyone comes together. Just that. It's an interdisciplinary activity.

I realize that maybe we were fortunate in naming traumatic stress disaster psychiatry. It has also certain disadvantages to call it that and I don't want to go into the background why it was named that way, but it certainly has become seen as part of psychiatry led by psychiatrists. The psychiatrists in Norway developed this field in the 1950s with studies of World War II sequels and from the 1970s with interventions after disasters.

We have some of the problems I understand you have in terms of funding and professional competitions and so on. To start from a very broad perspective, I think mental health professionals and psychiatrists in particular, could make several

contributions within what is called disaster prevention. All measures are designed to prevent phenomena from causing or resulting in disasters and other emergency situations, psychoviolence, just to mention one. Disaster preparedness, which is another U.N. concept, and almost all other actions are designed to minimize loss of life and damage. The third concept is mitigation. Each of these aspects of coping with disaster include consideration of the related psychosocial components.

Now going from there, if you look at the cases, you have the steady state pace in situations today in various places before the impact, alarm, phase warning, what have you. And then you have the impact which is survival, salvation and then afterwards.

So if we had time, of course, we could sort of pinpoint what activity mental health professionals and psychiatrists, in particular, could contribute in each of these time phases. The second model, the zone model, determines what kind of tasks would you be able to do after a disaster depending on where you are.

I don't think I will go into that. I'll just add something to the policy issue that Craig started with. In predicting the actions, psychiatry has been wrong. In World War I we predicted mass psychosis. Never happened. Now we are predicting PTSD, won't happen. We should kill false myths. There are many strong opinions held by the public about disasters, about panic, for example, which are important. To be concrete, let me mention that we failed to give advice to political decision makers on two occasions. For example, more recently two Swedish prime ministers promised the public that for the bereaved families of the Estonia Ferry of 1,000 crowns should be raised. Now that should never have occurred. Our prime minister did the same in 1980 when an oil rig capsized. It cost the country half a billion crowns and only six corpses were found. When a politician promises something, it's got to be done. A staff position there will be the proper place for a psychiatrist because we can predict that the emotional pressure put upon the decision makers leads to this kind of false promises.

Now the Swedish prime minister had to go back on his promise because when we looked at the situation, the conclusion was that the ferry should not be raised. And that was probably the most difficult decision we ever made. I think we have a number of

examples of this that will make decision makers happy to include, a psychiatrist on their staff.

Now one problem that I would like to mention in addition to this is that mental health professionals follow the medical disaster definition too closely. Their is a discrepancy between the number of physical injuries and the available resources and needs.

We should stress much more the psychological field. That's a situation of massive collective stress. For example, the head of the medical rescue operation in Estonia said of the ferry disaster that it was not, medically speaking, a disaster. Now by medical, he meant somatic, but 20,000 people were acutely bereaved and to me that is a psychosocial disaster because very few countries, probably none, are able to provide adequate care in the acute phase for a population at risk like this.

So I think we should not accept the medical disaster definition, if everyone is killed it's not a disaster. We know enough about the risk for body handlers. This could be a disaster situation.

What's made an impression upon our practice in Croatia, and we have the same experience in Kuwait, was the great number of traditional psychiatric patients. When psychiatric hospitals are bombed or evacuated the mortality rates seem to be very high, patients are without drugs, of course, and so on. This clearly was a priority.

But I think the risk is that we've become so occupied with new cases to prevent that we forget the existing psychiatric patient population.

We saw one problem in Kuwait and also in Yugoslavia. Kuwait had only four psychiatrists, national psychiatrists, so here the task really was how to develop preventive psychiatry, not based on psychiatry and family clinicians. It became perhaps the most important starting point.

In Yugoslavia, the problem in my opinion was opposite. Mental health professionals were too involved. What Kuwait and Yugoslavia had in common was that they had no tradition of well educated nurses who could work independently of this, so the tremendous resource that psychiatric nurses and nurses in general make up in a country where maybe 25 percent of the population are refugees was never used.

I won't go on too long here. I want to make another comment and that is tied to the nuclear issue of what a disaster is. It's the new way of deciding priorities that is based on medical knowledge. Who are to be treated first and who are not to be treated? In order to give the right order to mental health problems, one needs to see the overall evaluation of the situation. So I think the social workers and psychologists do have a problem here in that they will have difficulty prioritizing.

Furthermore, medical doctors, since they have training in disaster medicine as medical students and in our case they have field training from the military service, really have a background of moving into a disaster area. Also as psychiatrists, if they need to be something else, to have different role, they should be able to do something else as well.

And we've found that using the medical role is very important since I mentioned earlier today that being identified as a preventive intervenor is very different for psychiatrists. They're not used to working outside their offices and also the public perception of us is very much as clinicians.

So we are working hard to develop the psychiatrist's role as that of someone who is also on the preventive side. We have asked people in the various professions involving disasters and it turns out that people have very clear ideas about what police and rescuers will do and clergy, while psychologists and psychiatrists, especially if you have experience with us do not have clear roles.

Would Harry like to take over?

DR. HOLLOWAY: Not take over. Just to add a couple of comments, first I'll sort of interact with some of the things that Lars has said. One of the things that he talked about that I absolutely agree with was that disaster psychiatry is part of disaster medicine, but that psychiatry as a particular specialty has with it with other parts of medicine. If you are an anesthesiologist, you tend to talk about reanimation, the acute golden hours of the disaster as your acute period of care and you define it in terms of your own specialty. Surgeons in like manner start seeing their parts of disasters about an hour to an hour and a half after the time the disaster occurs, if there's a large number of surgically injured, because that's how long it takes to deliver them to the hospitals and the

whole issue, if you're in emergency medicine, especially with pre-hospital care, and other issues. In psychiatry, I think we have our own, as Lars points out, way of seeing the disaster and I think it's pretty valuable for the overall. One of these is the disassociation of the disaster model in terms of the number of physically injured. Large earthquakes, for instance, may result in huge mud slides, as you recall some of those in South America in which there were fundamentally no survivors. Technically, not a medical disaster. Not more medical cases than you can care for. Lots of dead bodies, no medical cases.

Bob did some of the investigations with the disaster that occurred in the 101st Airborne when its airplane crashed. The people who experienced trauma in that case were the people waiting at Christmas time for the return of that aircraft, all of whom had parents or spouses die on that aircraft. Impact is a tragedy. Again, not a medical disaster, no medical casualties at all, a tragedy. So we may want to think of other disasters. In addition to that, we may also want to make clear that the effects of a disaster, particularly a very large disaster, the Armenian disaster being one that is very striking, are frequently talked about in terms of the recovery phase of the disaster where psychiatrists need to intervene. And yet an organization like FEMA is not well set up to deal with the recovery phase of the disaster a priori. Very frequently the people are brought on posterially to deal with that. For instance, there were indeed individuals brought in for Hugo to help out along the line, but there does tend to be an overemphasis on the acute area and of course, in that acute area the critical issue of defining things.

Now let's go to the international aspects of this whole business of arriving at classifications. This whole process of developing the organized, propositional categories and appropriate classifications and taxonomies for managing a disaster is one of the huge advantages of operating across the various lines. When you are in the middle of a disaster it's happening to you. I think not nearly enough has been said about the fact that when a disaster happens it happens to the medical and the psychiatric and the psychologists and everybody else who is in that area. The fact that you come in from outside of the area means that you may bring in a perspective that is helpful.

I can't emphasize here how delicate this issue is. One thing I know when I am going to go to a disaster area is that I will consume resources at that site. That's the one

thing I know will happen. If I stay alive, I will eat, I will drink, I will use flush toilets or any other kind I can find and I will use a resource, thereby, so I must make sure that what I'm bringing to that situation exceeds, if you will, what I want to consume, since the resources are by definition already short.

But I do believe that if I had carefully thought this through I may bring in the issue that was brought up before, the recognition that acute changes in behavior are normal reactions and not abnormal reactions, and can be very helpful. In the acute or actually recovery phase to the Armenian earthquake -- I know Bob has been doing some following up on -- I think one case that was presented to us was that of an acute schizophrenic patient. Bob made the observation, after listening to her repeat what her delusions were, that he didn't know how it sounded in Armenian, but in English it sounded like what she had just said was poetry and somebody said yes, it's really quite a good poem. And as they began talking about it the overall mental diagnosis was post traumatic stress, depression and toxic response to multiple drugs. Diagnosis changes, view changes because somebody outside has brought a different perspective to examining what's happening.

Probably no greater perspective than what has already been named here, that of noticing that these things are normal responses.

I think there's another and a very delicate issue which has to do with the intra and extra, what anthropologists call emic and idic ways of seeing culture that the outside international person brings in perspective.

One of the most striking things in Armenia was that when I was on site in Armenia, I visited numerous Kurdish towns and villages that were some of the most damaged towns around. Not that the Armenian towns were not damaged, huge massive damage. On the other hand, when we saw patients using our hook up, our telemedicine hookup and we examined them, medical patients, psychiatric patients or any other kind of patients, one characteristic was that we saw not a single Kurdish patient. And of course, the reason for that was that frequently you come into the area, the Kurdish are the excluded minority. This is a country that is at that point preparing to go to war with another group and they're being explicitly excluded. The importance of the international

observer being able to take note of these conflicts and bring an international perspective to the standards of care, I think, is not an unimportant aspect of the kinds of care that are given in the disaster area.

It's interesting that in some cases, not necessarily that particular one, but in other cases in which people go through and review this, they begin to notice their own minorities that they are not providing the care to because they're having to review it and go over it with an ignorant person who is very frequently the international observer who must be trained and taught concerning the overall specific area.

Finally, of course, from an international perspective, I think there is tremendous learning for the people who come in from outside. I really agree with Lars' comment, I would have never dreamed that I would say there are too many mental health professionals here for the nature of the disaster. He was absolutely right. There were lots of people looking for patients, maybe more people looking for patients than patients looking for people. And that's a problem. That's a problem in any area where disasters are likely to be created.

Needless to say that par excellence was also an area where it was very easy to belong to the wrong minority in the overall proposition of obtaining care.

DR. WEISAETH: If I may, the intensive use of mental health professionals led to bypass of the self-help mobilization of networks, family, friends, neighbors and underuse of leaders, let's say a mayor or natural leaders that you present. I think unemployment developed among the professionals. It was particularly social workers and psychologists who were part of this.

DR. HOLLOWAY: I might add so that we will not with this group of psychiatrists be seeming to be going in one direction, there is good psychiatry too, it's across the board. It's across the board.

When you begin trying to attend the operation of translating the symptomatic and other patterns that are being observed, this process if carried out in a regular and fairly objective fashion is in itself extremely helpful in the international perspective. And it may raise issues that are very difficult to observe. For instance, in a situation where, and now I'm including disasters, and you may argue with this definition, the events in which

invasions occur or where things are associated with the active, human disasters in which the treatment of a particular group, like women in this society, will not be observed as closely by the society itself as it will be by the international observer coming in. Most people who know me very well will know that my view of things in general is not extremely optimistic. I've said that perhaps one of the reasons I work on keeping people alive in space and other places is that it is an unoptimistic place to live, given its overall characteristics.

Nonetheless, I think that there's another aspect here. The overall prospect of transnational boundary consultation leads to a trend such as that we've recently seen in the women's conference in which there develops an international standard difficult as it is, confused as it is, bringing as many different voices as it does to issues having to do with how the human condition itself is perceived at a very fundamental level.

This overall trend is one which has become possible, I believe, in the post-Cold War world where things are no longer caught in these overall boundaries of deadly hostility, but the issue of deadly quarrels, is at least sufficiently suppressed so that issues that have to do with more general recognition of human rights and health can be an area of discourse. International consultation in the context of disasters provides a very poignant occasion for addressing that issue. So that's another aspect of this, that will come forward.

I believe that once we have moved into that particular area, one can see how the operation of disaster relief with refugee and other populations is going to become an increasing problem. I don't know if Lars agrees with this, but right now, we were both in Yugoslavia because of our sponsorship there with WHO, but there are not a powerful lot of international bodies to provide such cross national help. This is not in my view, a well organized or extremely active movement in which professional groups have been outspoken in their wish to provide the aid that will help folks in the third world and elsewhere.

DR. WEISAETH: One model which would be useful here, and this is a new development, the United Nations, Department of Humanitarian Affairs are training UNDAC, United Nations Disaster and Coordination groups, since the U.N. may be the

only international body which will be in a legitimate position and they managed 150 health organizations wanted to go to Japan, 148 of them did not do that because this department said that Japanese do not really want foreigners to go. So it may be that this structure will be respected by all.

Now today, the UNDAC teams are made up of experts, technical experts, and maybe a medical component or in fact a mental health component could be part of that.

DR. HOLLOWAY: Thank you, Lars. You brought one thing to mind. I agree with that point and would add to it the following. You met with Craig Llewellyn earlier. I've known Craig for a number of years and I know one of the things he taught me very early had to do with an earthquake in Peru that he responded to back in 1970. In that particular earthquake disastrous consequences came from one of the rescue teams, a mountaineering team from the United States, seizing trucks and taking them away from the supply of food to another segment. The overall result and consequence was starvation of a particular area. So one of the things to really be aware of is the need to exercise control over the rescuers. I talked about rescuers -- if I arrive as a rescuer, I consume resources. I am also extremely dangerous because I have resources in a disaster site, and precisely those the group there does not. It is important to coordinate the groups that enter an area. Whether there are too many rescuers relative to disaster, whether they are really going to be able to operate is another important part of it and that's part also of providing policy guidance. It is a natural psychological reaction to want to provide help in these times. It's natural to be aroused by them, but Lars' point about advice for policy makers before that happens, explaining to them that this should be done with care and organization is another important role, I think, for folks in the area of psychiatry and the mental health professions.

I regard as mostly tragic, and would be very interested in a discussion here, the overall fragmentation of resource helpers into various brands of mental health professionals. I don't see that as very helpful either on a national or international scale. Our own team had social psychologists and we had a wonderful nurse for a second visit who I thought was extremely important for dealing with the resources there. I think there are a number of things in terms of knowing how to tailor the precise mix of specialties

you need that has to do with the issues of most effectively giving treatment and carrying out triage.

Those are the major points that I wanted to bring in and particularly the trans-cultural aspect of this. Usually, when giving the talk about disasters, I emphasize the fact that the disaster helper is going to require lots of counsel concerning the local culture. But it's also true that when we've gone over the follow ups at the actual sites and said what was the most valuable thing we did at a given site, frequently the answer wasn't the marvelous advice that I thought I was giving, but the fact that the people who were there went over and reviewed their own things. They said when they went over it with me they figured out various organizing things. I arrived at a particular stage and was the occasion for that review process. So it was **their** thoughts that were the important ones for organizing the overall response and I think that's important both in a national context, but also an international context.

DR. URSANO: Comments, discussion?

DR. HOLLOWAY: I know several people here have had experience in the international scene.

DR. URSANO: More than a handful.

DR. COHEN: I'd like to give you a couple of vignettes. I am again interested in the actual human aspects of this theme. I was asked to lead a team into Managua in '72. All of us don't know much when we walk into new situations, but we use some of our own principles that we know of back home. I have the advantage of being an American representative from NIMH going to my own culture, so that was a great asset and that's why I was asked to go. So what I found very helpful, and it was an acceptable method, was that when we arrived by invitation, I asked for any of the psychiatrists in Managua who were unemployed. The earthquake had not only broken all the clinics and hospitals, five or six hospitals were completely destroyed, but the patients had gone. So they had nothing to do and there were about 20 psychiatrists completely out. I asked them if they wouldn't join our team and choose the different pieces that we divided ourselves, children, all the components. Then they sat in with all our briefings and I also gave them little lectures, little teaching about disaster and techniques and so forth. So they felt that

when we left, they had a little bit more knowledge. They felt they were empowered to move on and we weren't seen as outsiders to insiders, but a collegiate team and that has worked very well in most of my international experiences. Generally, you find a lot of doctors who don't have anything to do because they don't think of being a disaster worker and second, they've lost their patients and their clinics and their hospitals. So one thing is to find out which medical people are free or if anybody is interested in the professional aspects of disaster.

DR. WEISAETH: I think that's a very crucial question to ask when we try to evaluate. What we do is a result of intervention that others have done. If we in any way have taken over, we probably would agree it's a failure, but if you mobilize through your teaching, for example, of motivating people, it's likely --

DR. COHEN: And they follow that and we're role models. So they sat with us and they listened to us.

DR. WEISAETH: Let me ask you a question because this is one of the areas where we feel psychologists and psychiatrists may not be the best role models. In fact, let's say you have a confused grandmother in a refugee family. My idea was that a nurse here would go in and show the family how we handle a confused old lady, while with our training we will not be likely to do that.

DR. COHEN: I agree with you. I sat at kitchens. I sat on the floor. You don't think you could help a confused old lady, grandmother?

DR. WEISAETH: I need to learn.

DR. HOLLOWAY: Actually, the psychiatrists in the Armenian earthquake did something that's uniquely psychiatric on the evening of the quake - the time of maximum disaster. They didn't know exactly how many people were dead, I think the independent estimates were around 90,000. They said we thought about going out and talking to people. People were gathered around fires. It had snowed recently. They were outside. They decided that wasn't a good idea, so they got baskets of bread and walked from fire to fire and this was seen as one of the most reassuring things that happened on that first massive day of the earthquake. Now it didn't happen at all sites in Armenia, but I've still always admired that. Now that's insight folks. As far as I'm concerned, that's insight.

When you're sitting there and everything has fallen down and you say the important thing is bread, I think you really have cut to it. By the way one technology that I need to mention here that we have been able to bring to that is telemedicine where the local physicians have the primary responsibility, but attach themselves to a larger world community. And we've utilized that at these sites, by putting transmitters at the sites to allow that exchange. The effects of that, of course, are mainly through the effects of what it does to help the local folks do their work.

DR. SHAW: Just a couple of clinical vignettes, one of the things I observed was the conflict of a different political belief system or even health care system. During my experience in Mozambique, which is a fairly social country, we worked with the child victims of war. We came with kind of an individual model, psycho drama, as a group sing out about what had happened to them, play it out and reenact. When we tried to interface with the professional group, the thing that was most difficult is they could not make a decision in the same way we would because they would have to make it by consensus. So it was really almost a cultural clash.

In Kuwait, it was a different experience because the Islamic religious beliefs dictates how come things happen, Allah wills. That just sums up everything and Kuwait suffered enormously because of the high percentage of POWs that are accounted for and it's a very small country with only about 600,000 true Kuwaitis. But a significant number of those individuals are held POW in Iran. Islamic obligatory religious beliefs requires an interminable mourning process, so you meet these women who in an obligatory sense have to mourn, cannot stop mourning because their husbands are still POWs. The children cannot be angry with the fathers. One boy articulated his feeling that his father had been so dull and this is why he had been picked as a POW. But in terms of the Kuwaiti belief system, these were heroes of the war and they don't understand, they don't seem to tolerate in terms of their religious belief systems issues of ambivalence. They're into psychic conflict and you have to unanimously come down on the side that the father is a hero to the war and the children cannot tolerate any ambivalence toward them. Therefore they're kind of frozen in place in terms of their own interpsychic conflict. I was just wondering what you think of that. I found it

fascinating, the cultural conflicts around political and religious beliefs and how in some ways they're really quite limited unless we resonate what their belief systems are.

DR. HOLLOWAY: I think that's part of what's going to come out in disasters. You meet exactly those kinds of circumstances again and again. I recall when I first took care, I was attached to the Thai Army and I was taking care of Thai soldiers who were double amputees. I was called to see them because there had been a number of attempted suicides and their dream system which at first I didn't understand. Dreams they told me about were dreams in which they appeared in their full dress uniforms or they were dressed in their saffron robes. All Thais spend three months in a monastery as part of their life cycle, to complete their life cycle. These were all young, actually the first patients I saw were all young NCOs who were 20 to 23. Gradually I became aware the question I had to ask them was had they completed their monastery time because you could not enter a Buddhist monastery if you were an amputee, without your complete body. You could only take your full body to that particular area. So what they were talking about, this depression they were feeling had to do with the overall cutting off of the entire life cycle, so that there is always a different, it seems to me, metaphoric discourse, depending on the culture and you're going to hear that in the various areas. The one thing I would argue about, instead of emphasizing the way in which that necessarily leads to misunderstanding which I think it can, is that it also leads to understandings if you're willing to listen and have somebody help you listen. It turned out that the difficulties that the local docs had with this particular problem and the reason I was being asked to see them was they regarded this as the most horrible thing too. They could not ask the patient about what it meant to be totally cut off from their life cycle and so then the overall group we talked to was how to work through that with my Thai practitioner colleagues. So I think that you're going to find those kinds of opportunities when you start working on the international front, whether it be about rape, whether it be about mutilation. We live in a society where to have a mutilated face is a really bad piece of news. If you want to see what social death looks like look at our own society, or the outcomes of disaster.

On the other hand, I'm really struck every time I go to Helsinki with the fact that I can go through Helsinki and know that I can walk through Helsinki if I was blind or deaf because I can see the signal systems built into the city that would take care of me, and yet my blind patients here in the United States have to live in almost hell because of all the pressures that come down on them.

So I think you're going to see that in all cultures and if you do this kind of international consultation it may open to you, open visions to you about your own culture. I think those cultural conflicts are not only there, but here and that this is one of the ways, one of the advantages of doing the international consultation on the other side, is to get a new vision of yourself.

DR. TAYLOR: Are there things that psychiatrists have done in other countries, either organizationally or politically or otherwise to define their role in disasters more clearly that could be extrapolated to the United States?

DR. WEISAETH: I haven't talked about that and I guess I could talk about that in great length. The activities of psychiatrists once a disaster has occurred, for example, psychiatrists on the hospital's disaster committee. I mean this is part of why disaster medicine is sort of a frame of reference. Hospitals do have a 24-hour preparedness role. We must tie mental health to that structure.

We insist that in each disaster community every hospital should have mental health professionals and one of them should be in charge of the organization that will take care of mental health and mobilize various teams and be on the staff together with the head of the medical disaster organization. That's a lengthy description and includes all of what you do with families, survivors, with injuries or not, health personnel and of known injured survivors, etc. For example, I think what we heard earlier today about the lack of predictors. I think we have very good predictors and after certain disasters we can predict the first week -- there are other types of disasters, there are many secondary disasters. But I think it would take too long to go through that.

DR. URSANO: What about broadening the question a bit to the issues unique to psychiatry in international disasters? One that comes through, resonates very clearly, perhaps it's just not as prominent in the United States any more if it was, but there is

something about being a physician that I think provides a unique entree in international settings as well as entry into certain groups that may not have other entry. It carries a set of expectations with it including an expectation of skills.

DR. HOLLOWAY: I would give it a Scottish verdict. It's not proven. The fact is that the nurses that went with us were traveling in areas where they would not have been accepted. They were probably accepted in part because they were with physicians, but the social psychologist from the Sorbonne might have been accepted as well as any of the rest of us, arriving in that particular setting. Whether we would have been as well accepted in the health care portion as opposed to the policy portion is another kind of issue because I think there are some real questions here that have to do with which setting you're talking about. I don't think politicians world-wide are necessarily inspired by MDs, frankly.

DR. WEISAETH: The one disaster where a medical background is of tremendous importance would be a nuclear disaster. You see the increased awareness of health. The problems then are not the ones of radiation injuries, but the many thousands who believe they have been injured and you describe physiological symptoms.

DR. HOLLOWAY: I think that's absolutely right and I think Lars is making a very good point. There are lots of disasters and the most prominent kinds of casualties generated in that disaster, but it also does depend on local cultures. There are cultures that think well of physicians and there are cultures that think less well of physicians.

DR. COHEN: You know, in the findings of the Three Mile Island, the highest findings of anxiety was in pregnant women who worried about their babies, their fetus, what will happen to their lives. That was the biggest worry.

DR. WEISAETH: Chernobyl was a psychiatric disaster. Psychologically, it has become one.

DR. PYNOOS: With those of us who have done work in the United States and have now done work internationally and people from other countries like Laura, there is a community of people doing things in a lot of different settings and I think you're right. I think any report from us should emphasize that there are, however, confusing and difficult international standards that are starting to come forward. When you do

international work, I would say now if you do work in the United States, it's equally as important because you can bring those up as something which the local community has to try to match. We do that in the inner cities now. We'll say that the school districts are listening and in Croatia, Serbia and Bosnia, they're doing this with kids. We're doing nothing like that in the inner cities and it's sort of a shame. My point is that there are some emerging standards that equally apply to the United States and elsewhere and it's important to raise those. I don't know if it's a psychiatrist alone because I think any mental health professional can help. I do think despite normal responses in an abnormal situation that it's imperative to bring up the potential for serious consequences and to speak with a very serious voice about those consequences in terms of what the risks really are and to do so in a very direct fashion, and I think that that is an important voice. Psychiatrists are probably more willing to do that as a profession.

Let me give you a small example. If you go to Oklahoma City, you start screening and you realize it's not going to be that much -- it's going to be PTSD amongst a certain group, but traumatic grief extends far further. We insisted on bringing in some experts on normal bereavement, people from San Diego and other places who can sit there and tell them even in normal bereavement 10 or 15 percent in the first year are going to be depressed, seriously depressed. You put that out to a community where there's a lot of death or whatever, 20,000, then you can start seeing what kind of services, even on a traditional medical framework. That is sort of new sort of thinking for them and that you better make sure that you don't miss any of those people because the consequences for them are really quite serious. I think we still have to keep that voice that can say given these risk factors in this, you can really predict there's a high risk of very serious consequences and be willing to voice that. I think we do that much more in a tailored way than the psychology field has so far, which has been much more sort of go in there and see everybody kind of thing and not keep a kind of screening and triage system.

I think the other thing internationally is to say that whenever you go to do work you do cross political boundaries and the standard should cross political boundaries. I give a lot of credit in the ex-Yugoslavia region to Rene Stuvlin's decision. He runs the

UNICEF program for kids in that area. He decided that he would have a program in all the governmental areas and a program that was equal in some fashion or another between Croatia and Bosnia and Serbia and even at times bringing those people together in international settings. It would have been easy politically to just stay in Croatia. The Serbs are the bad guys, the enemy side, whatever else. He chose not to do that. But I think it's given the program much greater strength. I think now it may run into problems, but then it would have otherwise, and it actually gave the work with the kids a different perspective, or the teachers because they saw themselves as potentially building a future, despite their hatreds for each other in some respects, but that was a commitment up front. The U.N. has a better job of doing that than an individual government because individual governments tend to take sides. I think in international work it may be very important to bridge that.

There is no better intervention that we could see in Serbia than telling an adolescent who had been badly injured and was in a wheelchair and who will never walk again, who then got himself walking, got himself rehabilitated and tell him, he told us his life cycle had been vastly altered and he was never going to go on to do the things he had planned. He was angry about guns being put in his arms and being told to go fight. The kids in Croatia told us the same stuff. He was aghast that we were hearing the same kind of things. That was more communication across boundaries than would have happened otherwise. I think it's important to set those standards, but then to see them as crossing international lines, even in political conflicts.

I don't think that always has happened. I think we're in a news era where that's much more of a possibility, if we can keep up an atmosphere for that.

DR. WEISAETH: You can find some good arguments for psychiatrists then. First of all, I think all arguments you use when you defend why the need to recruit psychiatrists for psychiatric teams, apply the same situation.

Secondly, if you want to fight for resources for mental health, it's a great advantage to know the priorities of those who have to make the decisions and there are many somatic and medical priorities to be thought about.

A third factor is the importance of early diagnosis in the ICD 10 and DSM 4 . That whole diagnostic process has now been sort of introduced into the post-disaster phase and of course, psychiatrists are trained in diagnostic processes, particularly. It is important that these diagnoses are hard predictors and that we find out when there have been certain situations.

Fourthly, the increasing role which I think is found for the premorbid personality function, the 20 to 30 percent of the population which has a psychological vulnerability, will make up most of the case population after a disaster, so to be able to evaluate, to take a history, you'll be able to evaluate psychological morbidity. So when we say it's a normal reaction, you know that's really not quite true.

DR. MELLMAN: I'd like to comment about normal/abnormal issues as well because I too believe that a big part of the world for psychiatrists is to assess and identify cases for intervention or more intensive observation. It seems to me that DSM 3 and 4 kind of helps us get away from that, the previous dichotomy of defining "disorders" in terms of distress and dysfunction and not really based on a theoretical model of what's normal versus abnormal. But my experiences with Andrew really underscored the fact that there are some people who are distressed and then go about their business and integrate in others. You talk about the contamination fears and the radiation situation for those who become so preoccupied, develop rituals, and can't function versus someone who can worry about it and then get on with other things. I think that is an important, a very important dimension of the role of psychiatry.

DR. SHAW: What happens if you don't intervene? Those who were exposed to an overwhelming stressor were twice as likely to have another psychiatric diagnosis or about 10 times more likely to have an anxiety disorder and three to five times more likely to have a depressive disorder. So clearly we'll have to intervene.

DR. HOLLOWAY: Part of it is the data isn't where he is and that's not all together his fault. They haven't put the data there, so there's that aspect. I do not want to miss one aspect of this, about doctors, per se, being there. One is the point Lars made earlier, a large number of endemic illnesses that are among the mentally ill in the area, as well as the mentally defective, are populations that are likely to become invisible in

disasters unless physicians are there and they will be dealt with. And finally, the critical role of the physician aspect of the psychiatry is in differential diagnosis. I've been in situations well, actually, case material situations where a patient appears following a sort of traumatic events in the local area with acute catatonia. Fortunately, the person who saw him knew that a bruise over the left flank might indicate in the course of other physical trauma another condition and correctly made the diagnosis of ruptured spleen and recognized the catatonia as a person being frozen in position, secondary hemorrhage into the sclerotic muscle and just froze and you could move the person in any position you want and he would stay there. Splenectomy was the correct treatment. Infectious illnesses can in disaster areas be seen as various responses to the illness. It is a very complicated environment. Toxic materials in that area need to be considered. The minute you start to take responsibility, you'll also take responsibility for the other portion of your skills as a physician in making differential diagnoses. I think that's an absolutely critical reason for why we need psychiatrists, particularly in the areas where we're not dealing with the tragedy, but with a disaster.

DR. WEISAETH: But we need psychiatric teams to do the visitation work when we have the military accident. You could get stuck if you have not kept up your knowledge in emergency medicine.

DR. HOLLOWAY: That's another point of what you said initially, this is part of disaster medicine. So if you go to a given area, you've gone into a disaster and it means that you have to take responsibility for making yourself sufficiently knowledgeable so you are able to learn skills.

DR. FULLERTON: I wanted to make a brief comment about language. Bob, when you asked the question about what's unique about psychiatrists when thinking internationally, two thoughts came to my mind. The first one is a term that they use to address physicians, professor. I know we had this issue with our Cambridge book and whether or not they wanted us to refer to ourselves as professor versus doctor in the connotation that the word professor means where a professor is teaching and helping others by teaching versus the connotation of doctor. The other thing I thought about is CBW, the issue of people being able to ascertain what's going on and talking, cure type

thing and the special issues that language brings into that. It reminded also of Chernobyl. When I spoke with one of the UCLA doctors who had gone over, one of the things he talked about working with patients over there was this issue about the language.

DR. WEISAETH: In most European countries, psychologists will not call themselves doctors.

DR. FULLERTON: A Ph.D. would not be a doctor?

DR. WEISAETH: He would be a psychologist. He would address himself as a psychologist and a doctor would be a physician. So that would be confusing if in America you use your American terms in other parts of the world.

DR. URSANO: Thank you, Lars and Harry, and speakers around the table. Perhaps we could move on to our next contributor, Tom. And look forward to his comments, both from the side of VA as well as from his own work of PTSD and sleep. You and Greg may comprise the entire brain trust of sleep disorders sitting here, certainly in terms of the United States, and perhaps in the world.

DR. MELLMAN: Thank you for this opportunity to interact. That's exactly what I intend to do is make some comments germane to the VA as well as clinical observations related to Hurricane Andrew and some research findings as well. But I was pleased that Dr. Lehman of the VA Central Office asked me to present and participate in this important conference. My link to disaster activity is very much a result of my having been broadsided in August of 1992 by Hurricane Andrew which struck where I live and work, in that order. Prior to that event, I had not paid much attention to disaster medicine, disaster research and so forth. I was and remain a psychiatrist in the VA system as well as do non-VA work. I had and continue to have a clinical and research interest in post traumatic stress disorder, particularly working with combat veterans in the Miami setting which include a rich mix of World War II, career veterans and Vietnam veterans as well as some veterans of more recent conflicts. So I have taken many histories from men who -- primarily men, a few women -- who have served in combat. And this provided a background for me that I think very much influenced how I integrated the experience of Hurricane Andrew, as well as my response as a clinician and researcher. I think this personal anecdote is relevant to the VA at large because, from my

perspective, the VA does have considerable collective expertise in the field of post traumatic stress disorder which clearly is germane to disasters. Clinicians in the system have a lot of cumulative practical experience and a patient population that's challenging. I think as a group VA PTSD clinicians appreciate the complexity of the presentations and are not typically going to be seduced by simple solutions or explanations from the problem. Often they have a repertoire of multi-modal interventions. In addition to PTSD, I think the VA sees a great deal of presentations related to other potentially chronic mental illnesses which are relevant to the work that can be done in disaster settings.

The second major issue for the VA is that it does represent a large, I don't know if it's the largest, single mental health system that has a structure and a rather clear hierarchy. Within that structure hierarchy are multi-disciplinary contributions with physicians having important leadership roles. I think all of this was germane to the efforts following Hurricane Andrew and potentially other disasters.

I now would like to make some observations specific to Hurricane Andrew. I had the opportunity ,and in fact it was facilitated by Raquel Cohen, to be involved in some discussions with the Red Cross under the auspices of South Florida Psychiatric Association for some preliminary attempts to do pre-disaster planning. Then Hurricane Andrew struck and really overwhelmed anything that we had set up. My initial efforts in that situation were to get myself and my wife and my toddler aged children at the time, and dogs, I should add, out of harm's way and to get our house on the way to repair. But I was able to go back and forth, actually, we drove back up to Washington. It was quite a trip, but then I had the opportunity to participate in some of the mental health outreach efforts that were going on. While my family was away I tried to write a research proposal as well, that ultimately got funded and helped us acquire efforts to the Hurricane.

From my perspective, the relief effort really began to form coherence when the military arrived, which as many of you may remember was several days after the disaster struck. I think local efforts were really overwhelmed prior to that. From the point of

view of someone severely impacted by the hurricane, the military was a godsend at that point and really did offer the development of coherence and structure to the relief effort.

There was a structure to the relief effort which I didn't fully understand then. I understand it a little bit more after hearing Dr. Young's presentation this morning, although I'm still mostly perplexed. It did seem that there were a number of sites that emerge that became convenient foci for intervening with populations and these sites were variably combinations of shelters with the Red Cross presence, supply centers and clinics.

The VA as a part of its national response apparently recruited through the national disasters relief mechanisms mobilized three mobile medical vans that were mobile medical units operating from VA hospitals to gain entry into rural areas. One was from Arizona, actually. I forget where the other two were primarily situated. But these were set up in a couple of the key disaster relief sites and our local VA staff supplemented their personnel and I participated in that as part of that supplementation.

I also had the privilege, and maybe a couple of you are familiar from this experience, of doing some work with the Navy Sprint Team mental health intervention team and in that capacity we responded to some calls and did some home visits.

There were a number of structures that emerged after Hurricane Andrew and I think under the auspices of some of the VA outreach efforts as well as university outreach efforts. I went with groups that canvassed, I realize this is a bad pun, the tent cities, as well as some of the other shelter facilities to inventory what was going on and whether there were cases that required intervention.

All these structures that I'm describing were around for approximately a three-month period and then they kind of waned, following which there was still considerable rebuilding and disruption to people's lives. I think the specific efforts of that time included the HRS. At this point, HRS supported mobile vans which I had the opportunity to lecture to and then that lecturing became more of a consultative process. After the initial three month period we saw many more cases that were directly related to hurricane effects presenting both to our university and VA clinics.

Of those experiences, I'd like to again underscore the VA mobile medical van experience because, as I mentioned earlier, in relation to someone else's comments, I felt that that was a very productive experience, I think in part because of the liaison relationship of myself as a psychiatrist and as part of a medical team that included a primary care physician and several nurses. I enjoyed and had the opportunity to do some of the primary care screening as well, but sort of kept a table aside much like in the Peanuts cartoon, "the psychiatrist is in," where individuals were identified and referred to me. I did actually keep a record of the specific frequencies of contacts. I think the other experiences I mentioned pretty much fall in the same categories, but I've listed these on the first page of the handout I passed around about the type of problems that presented in the settings. This would be about a month after the hurricane struck when there was still very severe damage. Immediate attention to people's safety and survival think were less of an issue at this point, but people's lives were extremely disrupted. I think contacts were evenly distributed between these categories, including exacerbation of preexisting anxiety, depression, sleep disorders, people who were reporting that they were hardly sleeping at all. I was always interested in pre-morbid history. Usually this was not the first, but perhaps it was the most severe episode and in this VA sponsored medical mobile van, we actually did have a small pharmacy. We did make some limited prescriptions and I found that very useful. There were also what I would characterize more as new onset of stress reactions, predominantly featuring anxiety, mood changes, sleep disturbance and then the chronically mentally ill. I think this is when social systems are disrupted, just the basic issue of continuity of medications, supplies, that other people have mentioned, people maintained on lithium or neuroleptics or antidepressants, was often disrupted, access to clinics, the largest mental health center of the region was demolished by the hurricane. Things were rapidly put in place, but we did see people who had defined mental illnesses whose access to care was disrupted and I don't know that these individuals were any more or less vulnerable to reacting adversely to the hurricane. In fact, I think some of the psychophrenics, if anything, seemed kind of immune to the shock and the stress, more so than the rest of us. But clearly their access to care was an issue.

By setting up "the psychiatrist is in" kind of shop, we did attract at least one or two frustrated relief workers who came by and ventilated and seemed to be pleased to have that opportunity.

I now would like to turn to some of the research findings, myself and my colleagues produced in the aftermath of the hurricane. The second page of the handout is a report of findings that's provisionally in press in the Journal of Traumatic Stress and was co-authored by my associate Daniella David. We did structure diagnostic interviews based on the SCID of a population that had been identified as having a high degree of impact by the hurricane, most having severely threatening experiences, sustaining various degrees of damage to their homes and disruption to their lives. This was a nonclinical population and we were interested in just sort of characterizing at a point on average, six to eight months after a hurricane had struck, the range of new onset of psychiatric morbidity. We only included in the sample conditions that were, at least by the structured interview criteria, not present in the six months preceding the hurricane. In other words, they could have prior lifetime episodes, but they were not ill prior to the hurricane striking. I do think the 51 percent having any positive diagnosis is a high one. This is not really an epidemiological sample, but it was a nonclinical sample and you can see it's consistent with other reports that PTSD is the most prevalent diagnosis, however, it's very closely followed by major depression. These two conditions often co-existed in individuals and in some cases I think one saw sort of a progression, talk about kind of phases of individual responses. I think one sees, sometimes, an evolution of an acute PTSD into a state of major depression over time and then there was an mixture of other anxiety-related presentations, new onset of panic, chronic worry, generalized anxiety, new onset of phobic problems. Then conditions that didn't necessarily meet that we had operationally categorized the subsyndromal based on being a symptom threshold shy of the diagnosis, but these people were also experiencing distress and to varying degrees, dysfunction.

Certainly cases that I saw as the university-based clinician and kind of an anxiety disorder defined clinic paralleled the findings from cases of the kind of the classic PTSD with nightmares and so forth of individuals who had the most severe end of the

threatening experience, roofs collapsing in front of them and on them, for example -- more or less new onset problems. I think about 40 percent of the sample had a prior existing psychiatric episode in their lives which actually is not far from the base rate of the population according to epidemiological studies. I think that may be a risk factor, but it does seem that disasters of the magnitude of Hurricane Andrew precipitate or exacerbate a wide spectrum of mood anxiety presentations and that was underscored from my practice. I remember one patient I treated who had kind of new onset phobic presentation that seemed to be intermixed. Certainly, there was a classic phobic anxiety, but also an alienation from the community that she had never really integrated into even prior to hurricane. Another individual who really presented with depression and had had PTSD before the depression unfolded, and interestingly while PTSD was more prominent, she found a practitioner of EMDR and found that sort of provided her some relief, but as time evolved, she really had sunk into a depression and this was related to frustration and uncertainty about her living situation and income, as well as some premorbid history of new problems.

The veterans we saw were very interesting to work with and observe. I think prior to Hurricane Andrew we had a real wave of new referrals to our PTSD clinics in conjunction with the Desert Storm operation which provoked a lot of reactions among Vietnam veterans and other veterans of other war eras. Hurricane Andrew did that, I think, to a lesser extent, but it also mobilized some of the veterans in a more positive way. They thought they had some relevant experiences and for example, the VVA, Vietnam Veterans of America, Dade County Chapter, was very prominent in some of the grass roots relief efforts. We did see some exacerbation, some new presentations related to the extent of the destruction and devastation and what it reminded them of, as well as the lingering military presence and the presence of Hey helicopters and so forth, was a trigger for some, particularly Vietnam, veteran patients.

Finally, I'd like to make a couple of comments related to the issue of sleep. I certainly feel and I'm sure others of you agree that sleep is both an important marker of morbidity related to trauma and perhaps a mediator as well. In the next sheet I have a figure where we looked at sleep quality through subjective measures. We asked about

people's sleep patterns before the hurricane, as well as at the time of the assessment, which was again the six to eight month period and I tried to represent it in sort of a stacked bar graph fashion. Without getting into the details, what we found is that people who were categorized in our study as having persisting hurricane related morbidity, that is presenting new onset hurricane psychiatric morbidity at the time of the assessment, not only had increased complaints of sleep disturbance at that time, but reported an increased rate of sleep complaints prior to the hurricane. Again, these were people who denied their criteria for psychiatric disorder prior to the hurricane. It was the case particularly with return to symptomatic awakenings and bad dreams, people with new onset morbidity were likely to report that prior to the hurricane, as well as an increased effect of the hurricane on their sleep complaints. So we think that sleep complaints and bad dreams and sleep interruption, insomnia patterns may mark vulnerability and certainly are exacerbated by the experiences of the hurricane which directly disrupted sleep in many individuals as well as having compromised sleep environments in the aftermath.

The next page, these are of the optimal dose for two more days and then stop and then we look a week later and find that actually sleep consolidation is maintained and PTSD symptoms were reduced. This is obviously very preliminary, but something we're excited to follow up on. I bring it here in part because obviously I'm excited about it, but also because I think it illustrates one possibility of what a physician and ideally a psychiatrist can do in intervening with individuals who have just been through overwhelming life threatening types of trauma.

But I think prior to prescribing a medication or psychotherapy or crisis counseling, perhaps the first key step is assessment. We do have assessment skills that I think can help us differentiate between various degrees of stress reaction, their relationship to the possible pre- existing morbidity states and whether a person would benefit from simply ventilating or needs more repeated on-going contact, social support systems to help maintain access to hospitalization or treatment with medication. To get back to my original agenda, I think the VA system does offer a collective group of individuals with expertise in PTSD and other potentially chronic mental illnesses in an

organizational structure that can provide an important resource in times of natural disasters.

Actually, these patients were prescribed serax. We're proposing temezepam because we see more sleep maintenance problems in our combat veterans. Most of these people are sleep deprived. They can fall asleep, but they wake-up an hour later, or they have awakenings through the night. So we're not so much trying to facilitate their falling asleep which they usually can do, so much as helping them maintain some sleep, so I arbitrarily picked an intermediate acting hypnotic medication.

DR. PYNOOS: We had a report of a sleep laboratory and we reversed just the arousal, trying to reduce arousal. Reducing the arousal does lead to much better sleep with reversible sleep disturbances. Not using a hypnotic, but using something that reduces arousal.

DR. MELLMAN: I tried an experiment preliminary with clonidine as well in that context. Again, I think the liability, obviously, with the hypnotic is continued dependence and that's fine in a controlled setting, very short term instructions.

DR. SHAW: In terms of Table 1, your subjects were divided in those patients with PTSD and those patients without PTSD, is there a difference? It's the low end?

DR. MELLMAN: It's the small end and this doesn't take into account co-morbidity. Probably the majority of people with major depression also had PTSD. Out of the 31 subjects with psychiatric morbidity the great proportion had PTSD?

DR. MELLMAN: Well, 22 of those 31 had PTSD. So in other words, there were 11 minus 2, 9 individuals whose morbidity was not defined by PTSD. Also among those 22 individuals whom we saw six to eight months later, the predominant complaints may not have been PTSD. It was more the historical pattern of symptoms leading up to it.

This is a community-based sample. It's two-third's male.

DR. URSANO: Not necessarily veterans.

DR. MELLMAN: These are not veterans in this particular study. These individuals were recruited from a study that was previously done under collaboration of Andrew Baum and Neal Schneiderman in Miami. We sort of got the second crack at the group so you may have heard them present on this group of subjects.

DR. HOLLOWAY: Age of this group?

DR. MELLMAN: Actually, I have the paper with me of which my associate was primary author. It's adults, it's an adult population, I think average age in the mid to late 30s.

DR. HOLLOWAY: Very old, very young were cut off age?

DR. MELLMAN: This is a young, middle-aged population, not because that's who we referred to. Not that it was set out to be recruited, but --

DR. HOLLOWAY: It wasn't an exclusion criteria, that's what I thought.

DR. MELLMAN: Right.

DR. URSANO: The mobile van is a standard part of your VA for reaching patients?

DR. MELLMAN: No, it's not a part of our VA. It was part of the National Response of the VA system which brought in three mobile van units and I wish I remembered exactly where they were from. One I know is from Arizona. It did some outreach work with Indian populations.

DR. HOLLOWAY: The vans did more than psychiatry, right?

DR. MELLMAN: Absolutely. I meant to emphasize that because they were integrated. In fact, they didn't bring psychiatrists, but I as a psychiatrist from the local setting went along with them and psychologists did as well, so it was clearly a multi-disciplinary group. When others mentioned the value of that, I can only base it on that experience. I saw some " medical cases" and helped with the triage.

DR. URSANO: Were you implying that there were physicians who came with the van, but not psychiatrists?

DR. MELLMAN: I'm trying to think if there were physicians with the van. I think people from out of town were predominantly nursing staff and we supplied most of the physicians, both psychiatric and medical. They may have had --

DR. HOLLOWAY: There was someone from Arizona associated with it.

DR. MELLMAN: I was kind of in a blur during that time, forgive me. Yeah, I believe there were. People were in rotating shifts too, so we may have replaced one of the physicians from out of town for a given shift.

DR. URSANO: Did you worry about obtaining gasoline or was that not a problem at that point in time?

DR. MELLMAN: Now the mobile van picked us up at the VA. I had moved to a part of Dade County that was hard hit by Hurricane Andrew about a month before the hurricane struck It's funny, I remember driving to the VA hospital, taking about an hour to get there and then going back on a bus where the vans were situated which I now realize was about a half mile from my house. But yes, the mobile vans were at a fixed site.

DR. URSANO: They didn't actually travel around to different places?

DR. MELLMAN: No, although I think that activity did occur, but that probably wouldn't have been the most efficient way to contact people because as I mention these sites that evolved through the efforts of the Red Cross, the military, and it's true, they were collaborative sites of Red Cross and military, FEMA. I remember we were in this area of Cutler Ridge, people would come in from the neighborhoods. I remember being in these areas that were within an easy walking distance of one of these shelter/supply/medical clinic sites and they truly were collaborative efforts. I remember the military in particular was circulating in the neighborhoods. I remember one of my contacts and I were escorted by military personnel to visit a person in her house because she was described to me as a refugee from World War II, Europe and World War II who refused to leave her home even though it had been condemned by FEMA and was some sort of psychotic reaction or whatever and I interviewed her and found the basis for her making that decision to be rather rational and she was very pleasant and gave us some of her knitting or something. So there was an outreach effort into the neighborhood itself, but also many people were just lining up to get supplies, to get water, to get food and they saw a medical clinic or they heard a medical clinic.

DR. URSANO: As a non-Floridian, my thought was that Florida might be one of the few spots where one could in fact run on solar cells after a disaster with some reliability.

DR. MELLMAN: If we had the technology in place.

DR. COHEN: One interesting point of Tom's is that it's a universal reaction to disaster. In all my work in South America that was the number one problem, was to sleep.

DR. MELLMAN: If I had a short period of time to assess a thousand people and if I had one question per person I think I would ask them how they're sleeping. That may be my bias.

DR. FULLERTON: Did you look at the relationship with eating and sleeping?

DR. MELLMAN: Not in any formal way.

DR. HOLLOWAY: Let's go back to World War I literature where it's most striking. People who were exposed to severe shelling actually changed their diets sufficiently to develop beri-beri. They would not eat. They would not eat in the front lines, so the actual development of A vitaminosis occurred in those events. That's partly a function of the lousy diets for combat soldiers. Let's don't kid ourselves that it was just an open choice, but the fact is that these circumstances do have these other associations with them as suppression of appetite is another aspect of it.

DR. FULLERTON: If eating is off, people might get up in the night and eat something which makes is worse, I guess, to get back to sleep. I would think that it might be related.

DR. URSANO: Thank you, Tom. We have asked Jon Shaw to lead us through some of the issues of children and at least initiate that discussion with his thoughts and begin us along with his free associations, as well as data, whichever he prefers.

DR. SHAW: What I thought I would do is present data very quickly from our experiences in Hurricane Andrew.

I would like to make it just in terms of what Admiral Young referred to this morning. We had clear data in actuality, about what the risk factors are that determine the psychological sequelae in children and adolescence and there's really considerable literature on the psychological effects of children and adolescents of disaster going back to Block and Silber study in the Vicksburg tornado study. They found that five factors predicted psychological distress. One was proximity to the zone and impact. One was some kind of physical injury. The family being killed, parental psychopathology and

interestingly enough school-age children tend to be more vulnerable than pre-school children and that's a finding that's been replicated over and over again. It appears that pre-school children are somewhat protected by their cognitive limitations and their readiness to attribute to parents protective functioning so that they don't always recognize the limitations of parents in protecting them.

We know from the Buffalo Creek disaster in which Bonnie Green and her group delineated certain risk factors; depressive, irritable family atmosphere, being a female, parental psychopathology, life threat, and I can't remember the other one at the moment. So those are known risk factors. It's very important to recognize that children are very different from adults. I think of Lenore Terr's work in terms of cognitive distortions in her study in the Chowchilla bus kidnapping. She found what she called Amen formation really relates to children's proclivity to use egocentric causality. Adults do it too, although it sometimes is less apparent. It's clearly apparent in children. Children always try and find somebody to blame and they're unable to recognize cognitively that disaster is kind of a capricious random happening that's not related to something they did or did not do. For example, one child in Hurricane Andrew really believed that the hurricane came to Miami because he had hit his brother that morning, and so there's a readiness to assume causality. Another boy had the idea that the hurricane had come because he had killed a spider and this is some kind of a retaliatory act.

That is an example of readiness concrete thinking because when they talked about the eye of the hurricane, they would draw pictures of a dark funnel cloud coming down ready to engulf this house and they would draw in eyes. So this was a monster with eyes that was really going to come down and engulf you.

Probably -- and Bob could speak to this as well, probably there are three main differences, I think, between children and adolescents. One is readiness to cognate distortions. One third of the children at the Chowchilla bus kidnapping had illusions and delusions around who had kidnapped them. Disturbances in a sequence of time which is really an age effect and then the issue of readiness or blame. The other is the proclivity to behavioral reenactments. There's a tendency to live out the trauma behaviorally rather than just to think it through cognitively so one boy after Hurricane Andrew got an ax and

said he was Hurricane Andrew and went out and chopped trees down. So there is this readiness for behavioral re-enactment. After the Chowchilla bus kidnapping there were a lot of children who acted out that type of behavioral sequence.

The other finding, and I won't go into it at great lengths because we can leave that for discussion is the whole use issue of developmental effects. Pre-school age children probably are more likely to have somatic, regressive symptomatology around sleep and appetite disturbances, dependency, and clinging behavior where school age children are more likely to manifest the classical symptoms we associate with post traumatic stress symptomatology. Adolescents also have more personality trade disturbances along with some of the classical symptomatology, but there may be a readiness to develop a void in personality traits or social isolation of estrangement. One may have a manifestation of external symptoms, so you may see some anti-social behavior or readiness and some adolescents will tell you the sudden awareness of the limitations and life cycle, one's vulnerability to threat may lead them kind of prematurely into a kind of pseudo heterosexuality, eat, drink and be merry, for tomorrow you may die, this response to this sudden awareness of their limitations.

Just very quickly in terms of Hurricane Andrew, I think we were fortunate, serendipitous in two regards. One, the hurricane impacted on the 24th of August with winds of 165 miles an hour, roughly 100,000 homes, apartments, trailers were relatively demolished. Eighty-five thousand people were left unemployed and there was some initial discussion about whether the schools should delay opening or they should open on schedule. A number of us stressed the real importance of routinizing the child's life as quickly as possible because we know that the school system, at least in terms of children, is the social institution probably within which, by which mental health services can be provided to children most effectively. I don't think Bob brought that up this morning, but it is very important to appreciate the value of the educational system as the predominant conduit by which one reaches children.

Now serendipitously, I got a call, probably in early September, from a psychologist in California who told me that he was the recipient of about a $20,000 grant from the National Teachers Union and that he had gotten that grant to train mental health

workers in Miami to work with children. After I got by my kind of initial angry reflection of why them instead of us, it became apparent he had no interest in doing this at all himself and once he took the cut he was willing to give us all the money. These really facilitated a liaison with the Dade County Public School system and we met with the Director of Attendance. He really had an enormous responsibility and political clout within the school system, and through him we developed a relatively interesting experiment. They had the funds to hire APA crisis intervention specialists. The teachers union insisted that these crisis intervention specialists be teachers and not counselors because it was expected that there be a high attrition of teachers employed by the Dade County Public School System. In actuality subsequent to the hurricane a number of families had left, school populations were declining and so they hired 88 teachers with very little experience as far as crisis intervention specialists and then we were given the responsibility to train them. We broke these 88 crisis intervention specialists into eight teams, 11 each. A member of my faculty was responsible for each team and we would meet with these teams every two to three weeks for approximately two to three hours. The faculty member served mainly as the facilitator, supervisor and consultant and we kind of orchestrated these crisis intervention teams. Sixty-eight of these specialists were assigned to the schools in a high impacted area and another 20 were divided up into four crisis intervention teams that traveled around the Dade County Public School system. We also put on two full day workshops. The first one was in November. Raquel Cohen was very helpful because she gave the presentation. She gave a talk on perspectives of community response to disaster. All the crisis intervention instructors were invited and we had about 150 people. We had presentations on school-based intervention strategies, the role of school in disaster, the normal psychological responses of children and adolescents to disaster.

Let me just tell you a little bit about how the crisis intervention specialists worked. About 72 percent did counseling, 62 completed a counseling course, but only 20 percent were actually licensed counselors and only 34 percent had completed a counseling degree. How many years of experience do you have as an in-house counselor? about 25 years? That's not very much. But by being teachers they had about

18 years of experience working with children and at the end of this experience which went throughout the academic year, we asked what these crisis intervention specialists did and how they spent their time. About 15 percent of the time was spent in individual sessions; 10 percent group sessions; about 4 percent of the time was spent with family interventions; 3 percent was the average number of crisis interventions and about 20 percent all together I think met with parents and staff teams.

During the two or three weeks of consultations, two or three sessions were really spent on emotional debriefing because most had been terribly traumatized by the hurricane itself. Through this kind of sharing of information, normalizing, clarifying the experience, they developed tremendous group cohesiveness and group solidarity and they were extraordinarily helpful to each other. The fact that they never really did become a facilitator for the most part because having lived in Dade County for years, none of these specialists really had access to information and the referral network that the rest of us did.

Now at the end of the academic year, I'm just going to give you some summary data, we asked the school principals, and there were about 30 of them, 39 schools, what they thought about the effectiveness of this program. One responded no, not at all; 7, yes or extremely well; and you can see most of them rated the effectiveness of crisis intervention specialist quite high even though it varied enormously from one school to another. A principal is like the captain of a ship, they have absolute authority, very sensitive issues of boundary. Some of the group process really dealt with how the help of the intervention specialists interfaced with the school administration. But 6.8 out of 7 said I would like this program to continue next year. These are just some of the suggestions they made. There's some contention about ethnicity, probably 50 to 60 percent of the children in Dade County are of Hispanic origin and there's some concern that the crisis intervention specialists weren't always of the right ethnicity. There was some concern about issues of family therapy and that they were not sufficiently trained to do family work. Again, it was generally very positive.

We asked school counselors what they think or thought because the school counselors are actually intrinsic mental health personnel to the school and in theory they

were competitive with the crisis intervention specialists. Some of them really did feel competitive. They had also attended our two-day training experience. They felt the training was a little less useful than the crisis intervention specialist. What's interesting about this data is that even though they felt they were more competent than intervention specialists about issues of mental health care, they were very quick to attribute to the intervention specialists a higher level of expertise than they had in terms of crisis intervention because of the special training they had.

These are some of the comments they made. Again, generally very positive, more training needed around girlfriend/boyfriend breakup. Again issues of family therapy and generally that the program should be continued.

Now in actuality, there is probably money to continue this program a second year, but Dade County Public School System decided not to do that for whatever reason. This was very, very painful for the specialists who in their group process had achieved a real set of attachment to other people in the group and they went through a mourning and bereavement process when this whole program came to an end. But again, just very positive.

DR. HOLLOWAY: How long then were these specialists operating?

DR. SHAW: Probably about 8 months. Roughly from October to June. It's hard to know what impact they had on the system.

Now the other serendipitous discovery, and I'm just going to show these slides very quickly, is that I became very close to one elementary school in the impacted area. In September, one of the principals had called me and said her teachers were not ready to open up school on 14 September. The truth is 12 of the 25 teachers had lost their homes and had to find alternative shelter. Another five had had their houses demolished, but really had no other place to live and she described the teachers as really being kind of two extreme groups. One group was really quiet, strained, unable to share their experiences with other people and just kind of kept to themselves. They were very apathetic. Then there was another extreme group that was very agitated and couldn't stop talking about it. I met with the teachers and had an interesting debriefing experience. It amazes me how well these things go, just to get them to talk. It was a very facilitative

experience for them and again they began to function quite well. But what I did was interesting. I took Bob Pynoos' PTSD scale and gave it to the teachers and followed them for a year. You can see that moderate to severe post traumatic stress symptomatology continued 60 percent even a year later and the teachers really are the silent victims of disaster. I'm convinced of it because we focus so much of our attention on children that we really don't actually intervene sufficiently with the teachers. I actually had a faculty member that would go to this school and was available for counseling one half day a week but the teachers did not feel comfortable using the insurance plan promoted by the school because of issues of confidentiality. Some issues that came out about teachers is many of them have married below themselves educationally and the husbands were often perceived as unable to really negotiate with the contractors, the code inspectors, insurance inspectors and the teachers were kind of held hostage in some schools because they had to teach and they could not get away and so many of the men were left unemployed. Major problem. Can we go to the next one?

DR. COHEN: Another thing, many principals felt a stigma to have a teacher be given counseling, so there was the principals who were very rigid.

DR. SHAW: I just want to go through the data very quickly. We were able to look at two groups of children, children six to 12 years of age in a Homestead elementary school right in the path of the hurricane and a comparable group of children in North Miami about 50 miles north. So we were really able to do a comparative study. We provided kind of an instrument looking at severity of exposure and we gave the teacher a rating form with 39 questions and Pynoos' post traumatic stress disorder reaction inventory.

Go on to the next slide. This is just the severity of the exposure and you can see at Redondo Elementary School, 80 percent of them had a door or window that was broken or came open; 55 percent had a roof that was blown away.

Next slide. I'm going to go through these very quickly. 43 percent had a pet that was hurt or killed. Next slide. The point being that there was a high degree of statistically significant difference in degree of exposure point of 001, so the Redondo Elementary School, the high impact school, was really much more significantly impacted

by the hurricane than the comparison group. What's interesting here is once you compare the two schools in terms of post traumatic stress disorder, the low impact school was at a comparable prevalence of mild to moderate post traumatic stress symptomatology which I think relates to the initial uncertainty where the hurricane was going to hit, suppressive evacuation. The real difference is in a severe to very severe category. Children in Redondo Elementary School were twice as likely to have children self-report post traumatic stress symptomatology of severe to very severe. Next slide.

Now this is the teacher rater form and this is really the interesting finding. When we compared the two schools in terms of the children, the children in the high impact school, in every major case, had lower indices of behavioral or emotional problems than children in the low impact school, so it looked like the children in the low impacted school were more disturbed as reported by teachers than children in the high impacted school. Some of these differences were significant. I won't go into it. Next slide.

We also had pre- and post- hurricane data on reported covert and overt disruptive behaviors by grading period for each school the year before, and the year after the hurricane. Next slide.

This just gives you the covert. Next slide. Now the line 1 here refers to the expected level of reported overt and covert disruptive behavior by grading period, the year after the hurricane on the basis of what it was the previous year. And so for the high impact school, the number of overt disruptive behaviors actually went down from 49 to 20 to the school year and for the first two grading periods it went down from 35 to 2. These are highly statistically significantly differences, so it looks like as disruptive behavior goes down in the immediate aftermath of a hurricane, the balance of the third grading period normalizes it by the end of the year. Next slide.

If we look at the low impact school, there's actually three to four fold increase in reported overt and covert disruptive behaviors in the aftermath of the hurricane which continued throughout the year. Next slide.

We wanted to make sure that this was not just a school effect, so we looked at all 39 schools in the impacted area to see what effect there was on reported disruptive and covert behavior the year after and the year before the hurricane. In actuality, the number

of overt acts of disruptive behavior reported went from 10,000 to 6500, the year after the hurricane and the reported covert disruptive behaviors actually decreased from about 3,000 to 1700. What's difficult to explain is somewhat counter intuitive, but if you think of the hurricane having a shock like numbing effect, then that actually initially dampens behavioral responses as people are struck with issues of survivability, that may explain some of it. Next slide.

DR. COHEN: Jon, can depression be part of it? Everybody was so depressed.

DR. SHAW: I'll get to that because I think that's an important variable. This is a low impact school. We looked at all 37 schools in North Miami Beach and again there's this increase of relative risk in terms of reported overt and covert sorts of behavior in the year following the hurricane. We think part of this effect is due to the flight of refugees. The number of kids registered in these schools increased by 13 percent after Hurricane Andrew as these families fled north. Some of the resources, intrinsic in those schools, they normalized and sent south. So you have this paradoxical effect that children on the periphery seem to be more disturbed than children in the impacted area. Next slide.

Well, this just shows on the Pynoos stress symptomatology questionnaire what happens over 21 months. The red is the severe, the very severe, and you can see the cascading effect, so that the number of children who are severe and very severe at the end of 21 months has gone down dramatically as a mild to nonexistent PTSD symptomatology goes up and moderate has gone down a little bit. Next. Next slide.

This is just raw scores, and you can see that over a 21-month period the average child at 21 months still has a 31 on the PTSDRI which is still moderate, post traumatic stress symptomatology. Next slide.

We looked at, continued to look at the Achenbach as it evolved over the 19 month period and we could see there was still a progressive increase of indices of behavior and emotional problems that went from 2 to 8 in 21 months. This is very comparable to McFarland's study in Australian bush fires. Children actually get worse over time. They do not get better, they get worse, and this is probably secondary to the increase in social maladjustment indices. There's increased absenteeism. Admiral Young talked about that this morning, child abuse. The event of trauma very quickly became an enduring stressor

with all kinds of secondary and psychosocial adversity with increasing consequences for children, so they actually got worse over time. And you could see for the boys, and these are mean differences between the mean at two months compared to 21 months. At 21 months the boys were more withdrawn, more depressed, had social problems, more attention problems, more internalizing behaviors. The externalizing behavior probably would be significant but with a very high standard deviation and the girls show less of an increase.

What's very interesting is that girls maintain a high level of post traumatic stress symptomatology throughout the 21 months, while boys really dropped down precipitously by 21 months, but it looks like the boys may be going back up in terms of behavioral problems.

These are just some of our conclusions. Post traumatic stress was greater 21 months later. 70 percent of these kids still had moderate to severe post traumatic stress symptomatology 21 months after the hurricane. The children in the area relatively unimpacted by the hurricane expressed mild to moderate post traumatic stress symptomatology and a significant increase in behavior, relatively behavioral stress in proportion.

This relates somewhat to Kaiser's study in Tennessee. In 1990 there was this prophecy of doom that there would be a terrible earthquake that would destroy Illinois and Arkansas, etc. and her group went out and looked at these kids. Even though this never happened, she found out a good proportion of children had mild or moderate post traumatic stress symptomatology just on the basis of anticipatory anxiety. We're expecting that there's a generic shock-like numbing effect on behavior and emotional response in the immediate aftermath of a hurricane, although it doesn't interfere with the post traumatic stress symptomatology. Post traumatic stress symptomatology seems to go up, but the other indices of behavior go down, and there's a rebound effect by the end of the school year. In actuality, these kids continue to get worse 21 months after the hurricane. In his study, McFarland looked at about 800 children, 5 to 12 years of age, who had been exposed to bush fires and compared them to a comparison group and found, paradoxically, like we did, that they were actually less disturbed in the

comparison group. I think he followed his group for 26 months, and that they got progressively worse over time. I think in summary, what you really have is that trauma gets converted to process trauma. It's very different from an act of terrorism because the events in a community continue long afterwards, and there really are phases in recovery. The problem with the disaster mentality is they only look at the impact, the heroic study, the honeymoon phase, but they don't look at the long term sustained effects, disillusionment, etc. Let me stop there. Any questions or comments?

DR. HOLLOWAY: One question. Maybe it's a question and then an observation. In looking at different measures, some of your measures are teacher-reported measures.

DR. SHAW: They are all teacher-reported.

DR. HOLLOWAY: Are any of them not?, because you previously showed us a set of slides that suggested to me that teachers were suffering from trauma. The real question is whether or not some of the effects can come from the changes that have occurred in the teachers, not misreporting, but the fact that there is a change in the adult population. The caretaker population is the thing that produces a chronic long-term effect. In other words, if you look at Armenia and the whole place falls down in 40 seconds, okay, then the next thing that happens isn't that the parents and other people who are taking care of the kids six months out are hotsy-totsy. They aren't hotsy-totsy. They're suffering the overall chronic problems of recovery and their care giver qualities are changed and they themselves constitute a long-term problem in a disaster in this so-called recovery thing. Do you have any thoughts about that?

DR. SHAW: One of our concerns was that initially maybe the teachers were unreporting in a protective effort to protect the children. Another way we thought we could control for that was to look at the larger population of 39 schools.

DR. HOLLOWAY: I'm not postulating underreporting in this case. I'm talking about care giving by the teachers themselves.

DR. PYNOOS: I think in Armenia you have it both ways. The disaster in which both child and parent have equal exposures. In fact, in Armenia in some cases children had worse exposures. In Spitak, half the children of every school died and every child in

Herzog died. Every school collapsed. So they had in fact the worst exposures, even worse than many of the adults. If you look at the family, you have parents trying to recover with children who are problematic which makes their recovery much more difficult and vice versa. So it's not as simple as just saying the children are recovering because their parents are recovering. The fact is the parents are recovering because they're also dealing with the fact that children haven't slept in six months. They have their own sleep disorders. They're as reactive to reminders as the parents. So it's a very interactive process matrix there.

DR. HOLLOWAY: That's the direction I'm trying to get.

DR. DAILY: What we're saying is the teachers had all these problems so that would affect their reporting the children.

DR. HOLLOWAY: New struggles and that sort of thing.

DR. PYNOOS: School age children are very sensitive to the welfare of their teachers.

DR. SHAW: I think the kids get worse for a lot of complex reasons, but most of them have to do with the fact that the whole infrastructure has been virtually destroyed.

DR. HOLLOWAY: Actually, I was making another kind of hypothesis. I was suggesting they got better because they became kind of care givers for their teachers. That was a thought that occurred to me, that they really saw, and these teachers are in Achenbach right now.

DR. SHAW: I think they did that for the family and the teachers. They didn't have time to be sick. It's like in combat or even your Department of Psychiatry faculty, when there's a crisis, they all mobilize together and watch in concert, but give them a little time and they'll all start bickering and fighting amongst each other. Soldiers function very effectively in combat. It's when you put them in a noncombat time that they become so difficult.

MS. LEVINSON: I have a question. You said you used the Achenbach teachers' scale?

DR. SHAW: Right.

MS. LEVINSON: Did you use the parent version?

DR. SHAW: No, we never do. Just use the teachers' scale because we don't have access to the parents. It was just so much easier to access teachers. It's just one of those things, easier to do.

DR. PYNOOS: What's important to see, though, is that Achenbach, although it can allow you to do the monitoring for the kind of behaviors, is extremely insensitive to the internal stress of acutely traumatized children. We have a number of studies around the country that would suggest that, so it's in some ways useless. You need specific measures that go after the specific signs of distress in rather general measures, which tend not to be very effective for adults of children. The lessons for children in some ways aren't different from what we've learned from adults. Achenbach is a good example of that. If you were to just go in and do a study of the Achenbach, you wouldn't pick up the kids who were really severe internal stress because there's no items that even address that. I mean you get some of it. The internalizing doesn't include intrusive images. It doesn't include some of the internalizing symptoms that relate to post traumatic stress.

DR. DAILY: Along those lines, is anyone following the art of these children over a time period? We did this in the tornado in Iowa. We looked at art work over a period of time at 24 and 48 and 70 some odd hours and a lot of times we had parents who brought the same kids back. Then we went back a year later to the schools and got art work on the anniversary of the tornado and it was very interesting how you could pick up some of the same children who had very distressed artwork were still having very distressed artwork. You could look back and do that kind of comparison where it showed the internal more than it did the external.

DR. PYNOOS: Jon has worked in Mozambique as well as here. I think that the general conclusions we taught from the child field is that a rational approach to children exposed to traumas is available and that we should have a good public health approach, mental health approach. That certainly puts in a prominent role for psychiatry, child psychiatry and adult psychiatry, because it's just the issues you're discussing and that hasn't really been done in the past. It's becoming the new international standard. We can talk later on about issues of prevention and predisaster work because I think there's some important issues there for children as well as for adults, but if you just look at the child

alone for a moment, we know that you can screen children for exposure at an early time, both from their reports and from other outside reports. You can screen them for their level of stress. You can screen them for their loss. You can screen them for evolving depression and other kinds of things, and you can rationalize the intervention strategies accordingly, I think, as you would do with any adult population. We have the methods to do that. Most of this work would probably be school-based around the world. That's now a principle. They've done that. They've tried to reopen schools in civil war areas in Africa. They've done that throughout the region, the Yugoslavia region. In Armenia, they put up tents and started schools and they use that as a site to do a lot of the intervention with children and families as well as to restore some of their normal activities. And in America it would probably mean that you bring more of the adult services to the schools, not just the child services, just for the reasons you were suggesting. When we have done surveys we can show you the distress in the children after the Northridge earthquake. We can also verify the distress in the teachers that often goes untreated for just reasons you suggested about confidentiality of services. But we can also show you the parents were not very well, they got very little services and if you want to combine those services the place to do it is the school setting. You'll never do it at outpatient clinics. You'll never do it at mental health clinics, although that's where the money goes by the traditional FEMA chain of money flows. One of the major things is to channel some of that money for adult work back into the schools to do more work with parents and teachers as well as to do primary work with children. I think that will be a major need in the next year to retinal the way in which you organize that. My point about psychiatry is that we have the tools to do that kind of screening, that kind of planning, that kind of using data for governmental planning. In Armenia, the best thing they did, and this happened recently in Oklahoma, was to take early screenings of children, this is now a year and a half later in Armenia, and put them on the desks of the mayors and in the local government and even, at that point, the Soviet government, which still existed in part at that time, and they reoriented their use of resources. You can show them that they're putting their resources in the wrong place. They were putting their money in the clinics in the wrong place. In Oklahoma, they've had principals that

said, "there's nothing happening to my kids," and we can put on the table what actually is happening to the kids, what's happening to their teachers, how many of them have lost relatives, friends, how many in Northridge lost homes.

DR. HOLLOWAY: Let me ask a question. Were they able to change in Oklahoma?

DR. PYNOOS: I think it's added to a community of work amongst the principals, and we'll go back to that, that may at least influence some of the principals. You said they were on their own. Whenever we do school work, we start with the principals. In Armenia, almost every principal had suffered major family loss, had seen children die that they couldn't get to and were in terrible trouble. No school is going to recover without treating the principal, so our first goal is to treat them. That's very hard to do. The Northridge earthquake was the first time that we organized primarily through the Department of Education because FEMA would give money to bring teachers in to debrief them and do some education about children, but no money for principals, because they're not first line caretakers. We had to get money for the Department of Education to bring in 400 principals from the San Fernando Valley and have them participate like the teachers. We kept them in their own groups, but as far as we know, nowhere in the country have we ever done a systematic approach to principals who are making the decisions about where to spend the post-disaster dollars as they got $15 a head. They could buy all flashlights. They made the decisions about how to go about spending this money with the school communities and if they're left untreated, they're going to make potentially pretty poor decisions about what to do. So we think an organized approach to children involves the parents, then starts with the principals and goes down to the teachers. We also know we can do organized work with children, both in classroom settings and with counselors, but I think much more tailored to the actual data.

In Oklahoma, there was a certain group of children with high traumatic exposures. There were a lot of grieving children and most of the effort going into the city was going to be for trauma counselors who knew nothing about doing grief work. It's like EMDR, people coming in whether you agree with them or not. None of the people in California, Los Angeles at this big convention had any idea about traumatic

grief work. They're coming in to do traditional work and that wasn't the issue. But you can't know that from the outside. You can only do that by looking at data, and we've done that with children. David Foy and I did this with people from Oklahoma. We set a format where we would ask about objective features, the trauma and what happened at the event. We'd ask subjective questions that we tailored to children that we found predictive, "was your heart racing fast?" In the earthquake it was "were you upset by your behavior or somebody else's behavior?"

DR. URSANO: Maybe I'm beating a dead horse, but what do you think a psychiatrist brings to that discussion that another social behaviorist doesn't?

DR. PYNOOS: Let me go through the categories. The secondary adversities, as they evolved, cannot be done. You can have the categories beforehand, but some of that has to be quite specific to the actual disaster so some of the questions are understandable. The degree of life threat is geared to the disaster, the degree of loss, perhaps. We found it was very important to put a category of traumatic reminders and how the child or adult is reacting to those reminders. After the earthquake, a very predictive characteristic is adults and children who are not able to calm themselves as well when there's an aftershock. They're getting worse. They turned out to be a high risk group.

And then some distress measure. I can debate what stressors are apparent as well as anybody else can. I think a psychiatrist brings both a sophistication about the potential consequences of these in terms of real life, psychopathology is the word for that matter, and how to set up an actual treatment situation that matches what those evaluations mean. With a certain high level of exposure, I don't think it's a degree of post traumatic stress that these kids are likely to be at risk for. If we don't treat the acute stress reactions early, what the risk of chronic PTSD would be. A psychiatrist, a child psychiatrist brings attention to what that means. It means attention deficit to risks of secondary depressions, risks of other potential consequences. That has real communication value to the schools, to the systems and to what treatment may be needed down the line.

DR. URSANO: Do we know the rate of use of ritalin and it's counterparts in the population? Was it abused by family practitioners?

DR. PYNOOS: All good questions. We found out after the violent event at the 49th Street shooting years ago, we haven't published this data but we have it all analyzed, that the attention deficit symptoms and the kids exposed to one event were dose related. You could show that kids had a year later, maybe not the disorder but enough of the symptoms probably to qualify for the disorder of attention problems.

DR. SHAW: They did a study of child sexual abuse literature and ADHD was found to be two to three times higher after sexual abuse as compared to the control.

ADHD is really not a diagnosis. It's a cluster of symptoms, a common pathway to a multiplicity of insults, one of which can be a trauma. Trauma seems to precipitate the cluster symptoms which we did phenomenalologically diagnose as ADHD because it meets diagnostic criteria. But it does seem a trauma can induce an ADHD.

DR. PYNOOS: A child psychiatrist in a specific way realizes a previously depressed child is likely to get more initial guilt than he needs. We've seen that. I would add pre-existing psychopathology to the list that you have, acute ADHD may actually get worse. That doesn't mean more medication. It means the school and family needs to understand what the interactions traumatic sleep disturbance means to a kid who already has an attention deficit.

DR. FULLERTON: I could see it going maybe a different way, there's more excitement and kind of a place to seek help.

DR. PYNOOS: A disruptive school schedule helps him because it's not very noticeable, but after a while those potential problems, PTSD left untreated, may actually be exacerbated and the chronic sleep disturbance may actually have made them worse. The pediatricians have a major role. In Serbia, one of the child psychiatrists there spent most of her time training all the pediatricians in Serbia how to evaluate kids coming in much more effectively than any child psychiatrist. We did that for the Northridge earthquake at UCLA as we trained the pediatric clinics, that any pediatric patient that came into their clinic be screened in their waiting room for exposure to the earthquake and for reactions to the earthquake prior to the physician's seeing them. We had that as a background of the visit, whatever the visit might be for. They found that very valuable. It's not traditionally done in pediatric circles and there's only now that kind of

communication. I think that the other thing we insisted on, and this isn't particular to psychiatry, but that if they had certain exposures that it be part of their school record, that the school health record consider seeing someone die in front of you and having a building collapse on them as something to be carried through in their health record as a potential issue to be understood. Later behavioral problems, traumatic reminders and renewed sleep disturbances, and all kinds of things that could happen over the next couple of years.

The other thing we suggest separately is that the schools have to separately monitor school personnel and children for secondary adversities. There's no monitoring system in most schools. That is, we have good findings in the Laguna beach fires that the kid who did his first move did fine, his house burned down, he moves. Then he made a second move and he was sort of doing okay. The third move the kid got acutely depressed and we're talking about suicidally depressed. We've gone back and screened kids that have been seen by counselors with the FEMA group for a year, none of them by good psychiatrists, psychologists. None of them had done any systematic ratings on them. They went and gave them a depression scale and they found out that about 20 percent of the kids they were treating had suicidal thoughts at that point that they had never known. And we also correlated that to some of the secondary adversities and monitored those so you could make acute interventions beforehand. You do a depression prevention study in that sense.

Those are issues that psychiatry at least provides some perspective on in terms of the seriousness of the adversities that happened to school personnel, the acute demoralization and depression that comes when they don't get a small business loan and what that can evolve into and how serious that might be.. They look good one day and not so good the next day.

DR. HOLLOWAY: Let me put the question the other way around, it's a question of stigmatization because each of the items that you're discussing as a part of the permanent record becomes a potential item that can occur later.

DR. PYNOOS: At least we found that the school again, internationally they found that a helpful suggestion. What you're putting down there is the actual nature of the initial exposure.

DR. HOLLOWAY: For ten years I saw oncology patients at Walter Reed's oncology service. That was one way they wouldn't be stigmatized, by seeing a psychiatrist. If you see a psychiatrist, what the hell, and so I saw them all.

One patient I worked with fairly extensively and had a good relationship with, who actually had a success psychiatrically and with regard to the oncology, nonetheless remarked to me as we were working through closing our relationship, that his response when talking to me when I first came to the clinic was, "I just had cancer and then I had cancer and a psychiatrist."

(Laughter.)

Now that's the question I'm asking.

DR. PYNOOS: If you do school-based intervention you avoid more stigma than you think otherwise, even to the kids.

DR. HOLLOWAY: Why not a psychologist in that case? A psychologist carries less stigma.

DR. PYNOOS: I don't think a psychiatrist, psychologist, nurse is the issue per se in the schools.

DR. URSANO: The question here is not about just how we treat kids.

DR. PYNOOS: I think a psychiatrist in a school system has a job of supervising, to be one of the supervisors consultation people to a team that can readily identify some of the potentially serious risks in situations and advise any treating team at the school about what might be called for at an earlier point before it develops into something that's more serious. That doesn't mean they're treating people.

DR. HOLLOWAY: What about the opposite? Is a psychiatrist any more or less able to help people not misidentify people with psychiatric syndromes?

DR. SHAW: I think a child psychiatrist brings in a unique perspective. They really do have a diagnostic capability along the spectrum of disorders. They're not focused entirely on PTSD. They also bring the developmental point of view which I

don't think many mental health professionals really have with them. The child psychiatrists have been exposed to the developmental perspective. The other issue is the capacity to use nonverbal modalities and particularly the emphasis of drawing and play and storytelling, whatever other modality they use and the child psychiatrists often have a clear understanding issues of cognitive development. That's not to say that psychologists can't have it. They can have it. It's not determined so much by credentials as it is by experience. I think child psychiatrists have a lot to bring, most of it in the area of training and supervision and consultation.

DR. DAILY: I am currently the school consultant for Tulsa Public Schools as one of the multitude of things I do around town. And I do that. I take in and screen after a school nurse has seen them first and then they probably have been sent to the psychologist and 9 times out of 10 when the referral sheet comes in it's question marked ADHD.

Now four to five times out of 10 it is ADHD when I see them. The rest of the time it's depression. A kid last week saw his grandfather die three years ago, started having behavioral problems and had been labeled ADHD by the school personnel who had been trained to pick this up. I think that psychiatrists can provide a supervisory, screening, training based position for the schools for when a catastrophe arises. I've gone out to shooting sites. I've gone out to suicide sites for the schools, etc. and so on a day to day basis with traumas that occurred in a school system, we can't provide the supervision, the advisement, the screening for the children who are at risk and I think it's a very important role for the psychiatrists to play in a traumatic situation.

DR. URSANO: I'm trying to expand the point. I agree, diagnosis. We've got that one. What do we want to say when the state commissioner asks why he should hire a child psychiatrist? I can hire these people and it costs me half as much, a quarter as much, a third as much.

DR. HOLLOWAY: I heard Jon say something else that was very important, "development."

DR. COHEN: To me the most important is differential diagnosis because there are two levels that you really have to know. The behavior of children in disaster can

look like ADD, can look, but your knowledge of biological, psychological science, you differentiate. To me, that's one of the most important.

The other thing is that I think we, in the next few years, are going to find some very important biological indicators of changes in developmental, you know, processes. One that is coming up over and over and I haven't heard anybody talk about it is high blood pressure in kids. For instance, in a disaster in Boston in '78 when a whole town got into a disaster, the athletic group, football players, basketball players, everybody had to go to a physical. To the great surprise of everybody all of them were suffering from high blood pressure. They were in a disaster five months before.

Nobody has followed, I haven't seen any studies and it's popping up here and there. High blood pressures.

DR. PYNOOS: Paris studies are very convincing that there's a change in heart rate. It can be chronic, no different than you see in soldiers and those that have developmental and physical implications in terms of the autonomic changes, so I think that we may need to medicate some of those to reverse them and psychological interventions may be inadequate. But also, to even gear what the nature of the treatment should be. What happens mostly in schools is that the kids who have the worse exposures are not always given a much different a treatment in the typical counseling situation in school than the kids who have had more moderate exposures. It's very important for somebody to really prioritize the nature and the severity and the nature of the treatment that's going to be given according to some legitimate factors. Now that could be done by a psychologist as well, but typically in schools that's the school psychologist.

DR. HOLLOWAY: Evaluating a psychophysiological response in terms of mental health is what you're talking about. That cannot be done by a psychologist.

DR. PYNOOS: A psychologist can measure heart rates and other things.

DR. HOLLOWAY: Major heart rates and the rest of that, but how it relates to other sorts of disturbances of the heart, how it relates to blood pressure, there is not a lot of pressure for that to be taken on the psychological factors.

DR. COHEN: I have to see if we are at the beginning. I have a feeling that we are going to find more and more physiological issues of development as we refine the research.

DR. FULLERTON: I think a key word here is identification, not so much identification of disorder, but identification by the community of the interface that a psychiatrist is going to have. Basically, other people are trained, counselors are trained or school psychologists, whoever, then a disaster happens and the only people who can really come in and do the work is a psychiatrist is what you're saying. I wonder whether or not that will be accepted. People won't get to the point of some of the stuff that you guys are even talking about. I think the community, the PTA, the parents are going to have an influence on whether or not a psychiatrist is going to be deemed. All the reasons you're giving are the right reasons, but these people may not hear it and the counselors and the school psychologists and nurses in the school may not feel as though these people coming in know more. I think interface is what's going to be important, whether or not a psychiatrist is called in. I can think of examples in Montgomery County, having grown up here, of the influence of the PTA and the parents and whether or not this is something that's sought or not sought after and I think it's going to depend on it. I think the interface is an important thing to consider in addition to all the things that everybody has been saying, because it's all that makes sense. None of that is weird at all. In fact, I agree with that, but I think it could be seen different ways.

DR. SHAW: I think you have to have a prior relationship with the schools.

DR. FULLERTON: Yes. You don't think of that. Typically, other people have been trained to do that, and now there are all sorts of child development programs. I don't know if psychiatrists are usually involved with the school or not. In my mind, I would say probably not.

DR. COHEN: The point is that if we can identify our role clearly, state it clearly and behave accordingly, I personally in all of my experience have never felt that there wasn't a place and that people didn't accept psychiatrists. It has to be in the right way in a modest way, in the language-sensitive way.

But the knowledge of psychiatrist is extremely important.

DR. URSANO: Do we see growth retardation in children when exposed to chronic stress from a disaster? Are they shorter, taller, overweight?

DR. PYNOOS: Good question. Armenian data showed that their growth hormones are affected and we don't know what the long-term outcome of that is.

DR. URSANO: Tom had the proposal that short people were likely to be more anxious than tall or one of the other, but that there's a relationship between the two.

DR. PYNOOS: I do think they were behind the scenes a lot more, there's a major role for us not to be on the front lines always, but behind the scenes. Our skills in being able to work through these problems are very helpful and in Oklahoma what we did was met as outsiders, and I think there's a real role for the outside consultant in any traumatized community, as we brought together child psychologists in the Oklahoma City School District who had never worked together before. We actually set down some principles about what they needed to do about screening and triaging and deciding on services. We were not treating anybody. They actually accepted all that in a system that had never provided any of that kind of care in-house.

DR. HOLLOWAY: It strikes me it is not your premise that in a place where, even Dade County, a child psychiatrist will see all of the traumatized folks. Can't happen. Can't possibly happen.

DR. FULLERTON: Most of the people in this room have experience in it, what if it was some others who don't have that.

DR. HOLLOWAY: What's being proposed is a role for the child psychiatrist. It's part of a community resource.

DR. PYNOOS: Disasters and child psychiatry is as much a field as disaster psychiatry for adults. That's not to argue, but there's a role for disaster child psychiatry in close collaboration with disaster adult psychiatry and probably vice versa more than has happened in the past.

DR. URSANO: Do we have sleep disturbances in children? Do we have a pattern to assess sleep disturbances in children? Do we have a pattern to assess caffeine intake during disasters in children whether it's Coca Cola or hot chocolate or coffee?

DR. PYNOOS: Those are things to be looked at. We know something without major sleep laboratory work at this point, but sleep disturbances take a real toll on children. If they take a toll on adults, they take a real toll on children.

DR. SHAW: If I could be a devil's advocate, after Hurricane Andrew the American Academy of Child and Adolescent Psychiatry has a Facts for Families flyer helping children after disaster, but if you look at the wording, they're apologizing. They refer to it as a medical or mental disorder. Well, I could tell you we got flack immediately from people in the triage areas that that was unacceptable and the school personnel particularly did not like it and we went back and rewrote it and described it as a normal response to disaster.

DR. URSANO: There were also children who were hospitalized because of broken bones, hospitalized because they had a concussion, hospitalized some of them because they had kidney injuries and therefore had all the accompanying potential psychiatric problems to go along with that. I haven't seen anything about a CL outreach program for children and there's hardly any for adults, but I presume that that all makes sense. I'm not a child psychiatrist. I'm speaking out of court here to say does that make sense? Is there something I'm missing or do all those apply as well. We articulate that using child psychiatry terms, that in fact can be heard by an audience that is pediatricians and pediatric surgeons who also speak to the needs of those groups.

DR. PYNOOS: I think in the same language geared to children as you would for adults, pediatric trauma teams know the same thing about that. Pediatric in-patient units and ICUs know that and it's been much harder for us at UCLA to support services for the children hospitalized in trauma teams than it has been for the adults. Although Perry is doing much more of that in Texas at this point. So that the need is there. Same thing with grief. When there is a major disaster and a lot of death, the children are often left out of the loop of looking and providing services for the traumatic bereavement, even when no services are supplied for the adult population. The studies now, and there are much better studies about childhood bereavement, once you've adjusted that, are probably an equally important service for those children.

DR. URSANO: Is it correct, and once again I know I'm beating this horse, but we're going to beat it even more tomorrow. It is appropriate to phrase the question as one could also say the use of medications in children is an extremely complicated decision on the distinction between bereavement and depression?

DR. PYNOOS: Yes. And there are studies. There are studies on normal bereavement, just like adult studies that 80 percent of them look like nearly major depression in one month. At one year you have 15 to 20 percent who are really depressed and will require real treatment over the course of some period in that interval, whether it's cognitive behavior, psychodynamic or medication. The statistics don't look all that different than adults.

DR. HOLLOWAY: What you say is very important because the distinction for use of medications is frequently severity of symptomatology at a given time, not the overall long-term diagnosis. At least some of that literature looks like some people who have severe bereavement reactions do benefit from antidepressant, at least that's still a viable hypothesis.

DR. PYNOOS: So I'm just saying that that group needs treatment as much as the adult groups and we've learned the same thing, the same questions come up about how to provide them support during that time.

DR. FULLERTON: It's important to talk about medication for children. I mean if people started thinking of it in a different way, it could become an unpopular thing where it's more accepted, I guess, if you're talking about adults. People are going to be less receptive to hearing a child is depressed and we should give them something.

DR. URSANO: Again, the same direction, is it appropriate to say the child may be the entree to identifying the depressed adult who needs treatment by medication that will, in fact, aid the treatment of the child.

DR. PYNOOS: Absolutely, the person who has seen the child has to be able to evaluate the parental situation because we run into major depressions and there are other responses in parents that have gone on unidentified and untreated. So you're absolutely right.

DR. WEISAETH: I think you're putting a price on psychiatrists' success in understanding the rationale, loss of control and a lot of scary things from people. We have had situations where a psychiatrist would be believed. Where he had a high credibility. You could say that this is not going to be crazy. In three days, you'll be normal. So that can also be positive. We have to work with the public image of our role, that psychiatry is also empathy. It's warmth. It's to understand that you can develop an illness because of life's events. But psychiatry was the last to accept that, it took the medical community to do so. When we ask people what causes psychiatric illness, the most frequent cause they mention is severe life stress. Well, if you ask professionals, severe life stress would be way down on the list. But I think we have to change our rules a bit. I must say not all psychiatrists are suited for this type of work.

Some of the work we have seen in people have been so well trained, seen some people who do not change.

DR. SHAW: You have to think systematically across systems. Not all psychiatrists can do that. They're too wedded to the individual model.

DR. BRANDT: But that was a unique perspective, being a consult/liaison psychiatrist, I also see an additional skill to pay attention to. The consultation skill is unique. It's dealing with an organization, which is a very important thing. How do you liaison with the organizations which are the key entrees are in the community, find that consultation relationship and expanded on it times of crisis? If those are unique roles that we have with an organization, we're already in a position to be useful and hopefully it will be pre-selecting psychiatrists that believe in the community and the consultative model.

DR. DAILY: Well, by having a preset relationship on some level, but our team went down to Oklahoma City and we were able to keep the schools open. A lot of the schools were going to close the day after the bombing. We kept them open. We had people in there until the big resources got there. We had a phone bank all night, the night of the bombing. Families called in, school teachers called in, counselors called in, all kinds of people, victims that were direct and indirect. We provided an immediate level of entry for the general public as well as those people who had responsibility for others

and were feeling a tremendous burden because there was so much fear another bomb would go off, etc. We allowed the public to access psychiatrists to man those phones and it made us very accessible and it really opened doors later on for other psychiatrists.

DR. HOLLOWAY: I go back to the reason of thinking about child psychiatrists being involved, go back to Hugo in this case and I'm thinking about the depressed presentation of Hugo. As a part of Hugo I ended up on somewhat or another of the talk shows and the one thing I carried as a message to that group was that in no picture of Hugo was there a picture of a child, yet, there were pictures of all kinds of homes that were torn to pieces, all kinds of people who had lost precious items, etc. etc., so there's really one other emphasis here and that is that the children in some of these disasters can get rapidly forgotten. I was concerned that I was seeing who was getting the emphasis and yet I could easily see that kids were affected.

DR. PYNOOS: I think again it would be the same thing. We found out after the Northridge quake that in any group we talked to a certain percentage of the population has panic disorders. They're the ones who already had remissions and were very frightened of having relapses. In fact they felt if they suffered a relapse of their panic disorders, they felt they'd be much harder to treat so they were real preventionary. There were lots of kids with preexisting disorders. I'm saying that the parallels are there between child and adult much more than people like to see.

DR. URSANO: We need the vignettes. We're at a time boundary here. They want us to stop.

DR. PYNOOS: Let me give you one example. Hurricane Hugo is a good study. Many of the kids developed moderate PTSD. The studies down there said they were treating anxieties, but I actually don't believe that as much for the severe PTSD, but that probably meant that many of them had fears of recurrence that were consistent with preexisting anxiety disorders or anxiety traits so that it is an indication that that group may be more fearful of recurrences, because they were all evacuated. They weren't like Homestead. So that again, being aware of that makes a difference in terms of setting up proper services.

DR. URSANO: Carol. You have the last comment of the day.

DR. NORTH: It occurs to me that psychiatrists are the only mental health professionals who can handle the most seriously ill. There are cases that the psychologists can't handle, the social workers can't handle. We're the only ones that can handle them. And there's a lot of them.

DR. SHAW: Suicidal children terrifies psychologists because it deals with responsibility frequently. They want somebody else to carry the liability.

DR. NORTH: We're the last stop.

DR. BELENKY: That's a very good point and I've been wanting to say something like that and I haven't known how to say it. That's it, the issue of responsibility.

DR. TAYLOR: That primary care physicians, psychiatrists as a pair cannot handle and the primary care physician I think looks to psychiatry to handle that.

DR. URSANO: Okay, it's the end of the day. We're going to reconvene tomorrow at 8 o'clock. I would suggest you think of two things tonight while you're perusing and in your dreams: think about who is not being treated because psychiatrists are not there and who is being wrongly treated because psychiatrists are not there. That includes children as well as adults. Lastly, please think of vignettes that match that. The one that does not is if you have a single case of a child who had a crush injury who was not recognized that also had a significant psychiatric disorder. If that vignette is there and someone notices that vignette, it will carry much more weight than many of the other words. Tomorrow, I will try to get these words handled into a shape where we all feel we're moving towards something. We're all in agreement on the idea. Now we've got to get it into a form that is not only rationale, reasonable and supportable scientifically, but also carries a punch as well.